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Sorgo Department.

Address of Norman J. Colman, President, before the Mississippi Valley Cane Growers' Association, January 16th, 1884.

Gentlemen: It becomes my duty as president of this association to lay before you some of the results of the past year's labors in the Northern cane industry, and to make some suggestions in relation thereto for your consideration. In some respects the past year has been both an unfortunate and a fortunate one to the followers of this industry. To those in the extreme northern portions of our country, it has been unfortunate, not on account of any defect in the northern cane, or in the promised crop, but on account of the unprecedentedly early and severe frost, which greatly injured the cane, and entailed great loss upon our northern brethren. It is true most of them cut their cane at once, and made the most and best sirup they could, under the circumstances, and many of them in this way escaped without much loss; but the profits which they had so fondly anticipated had disappeared, like the frost, which had brought their disaster, before the morning sun. Not for a score of years before had there been so early and severe a freeze. Indian corn suffered the fate of the northern cane, and it would be just as wise to say on account thereof it will not answer to plant corn in the North, as to say it will not answer to plant sorghum in Iowa, northern Illinois, Wisconsin and Minnesota. Where Indian corn will mature, the earlier varieties of sorghum will ripen, and one year of disaster should not deter any one from planting cane or corn.

It was way up in Minnesota that the new boom in sorghum commenced. It was there that the real merits of the Early Amber were discovered, and heralded abroad. It was there that sugar was first made from this variety, and the fame of the Early Amber spread far and wide. From Hon. Seth H. Kenney and C. F. Miller who first brought it prominently before the public, we learn that they are not discouraged—but that they will plant more largely than ever before; that their successes in the past ten or twelve years assure them that they can enter into no branch of farming that will pay them one year with another, as well, and that the partial loss of a crop, even one year out of ten is no sufficient ground to induce them to cease cultivating cane.

In this connection it is perhaps well enough to urge the importance of paying more attention to the earliness of the crop. It should be matured as early as possible so as to get it out of the way of even an early frost. To do this everything should be done to contribute to that end. Where the land is suitable, fall plowing should be done. The best of surface drainage should be given to the land, so as to remove all standing water, and all unnecessary moisture. The draining would be of the greatest advantage, maturing the crop from one to two weeks earlier in most seasons, and in cold, wet seasons much more than that. It would prevent the seeds from rotting in the ground and, take one year with another, double the yield of cane to the acre. It has been demonstrated that sorgho is not an exhaustive crop; in fact, many urge that, like clover, it adds fertility to the soil, so that the plant may be grown on the same land, year after year, with very little deterioration to the soil. It is a question which cane growers should carefully consider, whether it will not pay to tile-drain land for this crop. In the North, where early maturity is so important, we feel confident it will, and indeed, it will pay to tile-drain for all kinds of crops. If it pays to tile-drain for corn, as all farmers affirm, who have tried it, it will certainly doubly pay for so important a crop as cane.

In addition to drainage and most thorough preparation of the soil, it has been demonstrated, by repeated experiments, that fertilizers can be applied to cane with decided advantage, not only in increasing the yield of the crop, but in hastening its maturity. The experiments of Prof. H. A. Weber at Champaign, Ill., which he spoke about here last year, bringing with him plants, showing the effect of fertilizers upon them, convinced even the most doubting that it would pay to fertilize cane. The plants so treated were much larger, more vigorous, matured earlier, and contained more and better juice. Every manufacturer of Sorghum will tell you there is the greatest possible difference in the quality of cane; that if good sirup and sugar are expected, there must be good cane, that it should not be stunted, shriveled or inferior in any particular, that it should have no set-backs, but be pushed along, as rapidly as possible, from the time it appears above the ground till it reaches the mill.

The past year has demonstrated the fact that Sorghum is a real sugar-producing plant in any part of our country. No special effort had been made to manufacture sugar from Sorghum on a large scale prior to 1883, except at Champaign, Ill., and Rio Grande, N. J. It is true sugar had been found in the sirup here and there all over the country—but the opinion seemed to prevail that the result arose more from accident than from a well planned, pre-determined effort. Capital, always timid, was fearful to embark in the business of manufacturing sugar from it. However the experi-

ments at Rio Grande, N. J.; at Champaign, Ill., by Profs. Weber and Scoville; at Madison, Wis., by Profs. Swenson and Henry; all conducted in the most scientific manner, seemed to embolden a few gentlemen possessing capital, and the new and inviting field of Kansas was selected, not without some misgivings, for a further trial of the sugar properties of this northern cane. The fact was well known, that but little sugar had been produced in Kansas; that sirup had been made the chief object, and the question was to be settled whether sugar could be produced in large and paying quantities in that State. The sugar factories had to be built, the cane had to be planted, and everything got ready in short time, and under many adverse circumstances. The season was quite unpropitious, and the severe storms and early frosts did some damage in certain portions of the State and, yet, at every factory erected in that State, there was not a single strike for sugar where it was not obtained satisfactory in quantity and quality.

The Kansas Sugar Company at Sterling, was in charge of Prof. M. A. Scoville, formerly of Champaign, Ill. It was operated under what is known as the Weber and Scoville process, and some two hundred thousand pounds of sugar were made. It is a fine, dry, light colored sugar, finding a good home market on account of its excellent quality. Such sugar will find a market anywhere. The sirup from this factory was a standard article, equal to a sugar-house sirup, and better than the general run of New Orleans molasses. This establishment purchased their cane from the farmers, paying therefor two dollars per ton, topped and stripped, and delivered at the mill—the farmers retaining the seed, which in value was nearly equal to a crop of corn on same area of land. By way of experiment this company arranged with a sirup works eighteen miles distant, to reduce cane to a semi-sirup of 25° Beaume, after which it was to be delivered at the Sterling works, there to be put through the Weber and Scoville process, and made into sugar and sirup. From their experiments and experience with this sirup, they feel assured that they can in future dispense entirely with grinding at their factory, and get all the semi-sirup the farmers around them can make, and hold the same for manufacturing purposes until they are ready to work it, thus affording the central works an opportunity of running at least nine months in the year.

In my last annual address, I spoke of the importance of the central factory system, and again urge it upon the attention of capitalists. It requires a heavy outlay of capital to erect a large sugar factory, but farmers and neighborhood can, at not very heavy expense, make a semi-sirup, which the sugar factories will be glad to purchase, and pay good prices for. Farmers who grow wheat are not expected to erect flouring mills upon their farms; so they can raise cane and even make a semi-sirup without having a sugar factory.

The Hutchinson, (Kas.) Sugar Works were under the charge of Prof. Magnus Swenson, formerly of the Wisconsin State University, at Madison. This factory manufactured some two hundred thousand pounds of sugar, and a large stock of molasses. The company planted its own cane.

The Dundee Sugar Co., of Dundee, Kas., made ten thousand pounds of sugar, just as a sample of what they could do. This company put a section of land in cane, which was all they had to use. They have reduced the business to a science, bringing down the cost of production and manufacture, it is said, fully fifty per cent., conducting all their operations under the most rigid and economical system. They make a specialty of a fine quality of sirup, and made this year over 50,000 gallons, for which they find a ready sale in the markets of Colorado and New Mexico.

Then there are the Kinsley Sugar Works, J. Bennyworth, proprietor, Kinsley, Kas., which, besides making a large quantity of sirup, also made some ten thousand pounds of sugar, and the Lawrence Sugar Co., of Lawrence, Kas., made some ten thousand pounds of sugar. I mention these various works to show that sugar can be made certainly everywhere from Northern cane if the proper apparatus is used. The results at Champaign, Ill., and at Rio Grande, N. J., the past year, are too well known to be repeated here. From what we can learn, there will be, in all these establishments, a large increase in the acreage of cane, and in the manufacturing facilities for the year 1884.

Sorghum has some advantages, possessed by no other sugar-producing plant. Its chief rivals in the production of sugar are the sugar beet and the Southern sugar cane. The efforts made in this country to utilize the beet for sugar-making purposes have not proved successful, and it is feared will not prove successful, as it requires a good deal of labor to cultivate and harvest the crop, and it is likewise a gross feeder upon some of the best properties in the soil. In the old world, where labor is abundant and cheap, it is largely produced, and is one of the most important sugar plants. It is to be regretted that the sugar beet has not proved successful in this country, as a sugar producer, for every industry that helps to render this country independent of foreign nations, should receive the most liberal encouragement.

The Southern cane is, of course, the

best of plants for the production of sugar. In its own latitude it has no rival. It yearly adds millions of wealth to our country. It helps to supply a necessity in every household. It keeps millions of dollars home, every year, that would otherwise be sent abroad to enrich other countries. But this Southern cane has a near relative in the Northern cane, known as sorghum, for both canes are botanically related, and belong to an order of grasses known as gramineae,—that in some respects has advantages over her Southern sister. While the Southern cane will produce a greater yield per acre, the Northern cane can be raised in so much shorter time, at so much less expense, and be harvested so much more expeditiously, that it is doubtful whether Southern sugar can be produced as cheap as Northern sugar. Indeed with the improved drills for planting the seed, and the appliances for cultivating the crop, it is doubtful whether one acre of Southern cane can be grown as cheap as two acres of Northern cane. And from actual experiments with Northern cane it is certain that two, and, to be quite on the safe side, we will say three acres of Northern cane will turn out as much sugar and sirup as one acre of Southern cane. Our labor at the North is far better than that at the South, as one Northern man in our climate will do more than two if not three negroes on the plantations. But this is not all. There are no seed heads on the Southern cane, while, on the Northern cane, the amount of seed raised equals about the amount of corn that could be raised on the same ground, and its value for feeding cattle, horses, swine, sheep and poultry is about equal to corn, and is sufficient to pay for raising the entire crop. As a stock food, or for dairy purposes, sorgho is every year becoming more and more highly appreciated.

The planting of cane is yearly extending, and I could give you hundreds, yes, thousands of cases, where the growers say that no kind of farming pays them as well. Every reader of the RURAL WORLD knows that such statements are made by men throughout the country, over their own signatures, and yet the general public seem to think that sorghum growers are a set of old fogies, and do not know what they are about. They seem to think that neither the sugar or sirup they make is fit for a white man to use, and yet as good an expert as Edward J. Gay, one of the oldest and largest manufacturers of Southern sugar told me when I exhibited to him samples of sorghum sugar that it was fully equal to Southern sugar and he could see no difference between it and Southern sugar.

[CONCLUDED NEXT WEEK.]

COL. COLMAN: I take great pleasure in saying that during some years' trial of your RURAL WORLD I have found it one of the best advertising mediums I have ever used. In fact, I have sometimes been obliged to withdraw my advertisements from it because orders came in much faster than I could fill them. I would further say that as a practical farmer I read your paper with much interest, and can understand why it is such a good advertising medium because you make so good a paper that all live farmers must have and read it.

Very truly yours,
GEO. L. SQUIER.

Buffalo, New York.

COL. COLMAN: Many thanks for your cordial invitation—private and official—to be with you on the occasion of the approaching meeting of the cane growers association. It would give me sincere pleasure to be with you on that occasion and to do all in my power to aid in promoting so good a cause. Unfortunately my academic duties which take up again on the 11th, after the winter recess, will not permit me to do so.

I am going to Washington to do something if possible to promote this sorghum matter, unfortunately complicated and retarded there by circumstances well known to you, and which are quite aside from any merit or demerit in the cause which has been so deranged.

Perhaps I may find time to send you something for the meeting.

Yours sincerely,
B. SILLIMAN.

University Club, New York.

COL. COLMAN: I have to this late day delayed replying to your kind invitation to attend the convention to be held next week in your city in the hope that I could come; but very serious illness in my family prevents my leaving home at this time. I certainly hope that the good works you felt justified in saying a year ago, in behalf of this new industry, you may with the added experience of another year, although unfavorable for fairly average results, feel fully justified in repeating this year; and I know that it must give courage to the friends of sorghum to know that the investigations have been so very successful in their works they can afford now and then to stop and assume the roll of advocate.

That your deliberations may tend to hasten the time when your predictions shall be fully verified, is the earnest wish of
Yours sincerely,
FRED COLIER.

Washington, D. C., Jan. 8th, 1884.

COL. COLMAN: I must have the RURAL WORLD; cannot get along without it. Have been growing and boiling

cane since it was introduced into this country. Have not only grown it myself but have encouraged the farmers all the country round from the very beginning. All through the dark days of the sorghum industry I have stood by it and worked at it, sometimes working only 500 to 1000 gallons. But since the introduction of the Early Amber seed all have gone into the business with more enthusiasm and are raising much more cane. I have a portable furnace of my own invention in which I can burn wood, coal or bagasse, and all that have seen it say it is a great success.

It is just the thing for a prairie country where rock is scarce. It is of cast iron and will last a lifetime.

I use neither lime nor any other drug, but my sirup granulates freely when well boiled, and I find a ready market for it at from 50 to 80 cents. The past season was a bad one for the business and it was nearly a failure in this part of Ohio, though there were a few good lots made; my own was only about 700 gallons. If the next year's crop is favorable I expect to make 3000 gallons for customers, besides which I shall raise considerable myself.

I would very much like to attend the coming convention but am afraid I cannot. Shall want a copy of Dr. Collier's book when published; suppose you will announce it.
J. W.
Cedar Valley, Ohio.

State Meeting of Iowa Cane Growers.

EDITOR RURAL WORLD: The State convention of the Cane Growers' association met in the Court House in this city yesterday at 10 o'clock, with President Clarkson in the chair. F. P. Moffitt, of Albion, was appointed Secretary. The President then delivered an address, dwelling upon the history of sorghum culture in this State and the rapid development of this new and profitable industry. He declared that the State and county fairs should place premiums upon sorghum exhibits, especially of home made sugar. A vote of thanks was tendered the President for his very interesting remarks.

Mr. S. S. Shields of Newton, exhibited samples of sirup of his own making, that brought him 60 cents per gallon. He said he made 4000 gallons last season and the longer he raised cane on the same ground the better the yield. Mr. J. B. Keables, of Prairie City, made 1000 gallons only, but was satisfied that it was a paying business. His cane produced 100 gallons per acre.

Mr. W. M. Gilham, of Dallas Center, showed samples of sirup also, and said his Early Amber cane would produce 170 gallons per acre.

Mr. Jacob Eshelman, of Altoona, made 4000 gallons last season, and was convinced that the business would pay well.

Mr. Martin, of Mason City, said that he had had considerable experience in raising cane in Northern Iowa, and proposed to continue the business. This year the early frost had done some damage in his section. Mr. Shields said he planted his cane late in the fall so as to get an early start. In the spring, Mr. McGrew, of Earlham, reported that he had been raising sorghum for 18 years, using the Early Amber variety only. Last year his crop was poor but he generally managed to secure about 200 gallons from each acre planted. Owing to the failure to prepare a programme at the latter meeting, most of the talk was simply informal; still considerable interest was manifested. The convention re-elected the old officers and adjourned to meet at Marshalltown, Dec. 9, 1884.

SAM SLICK.

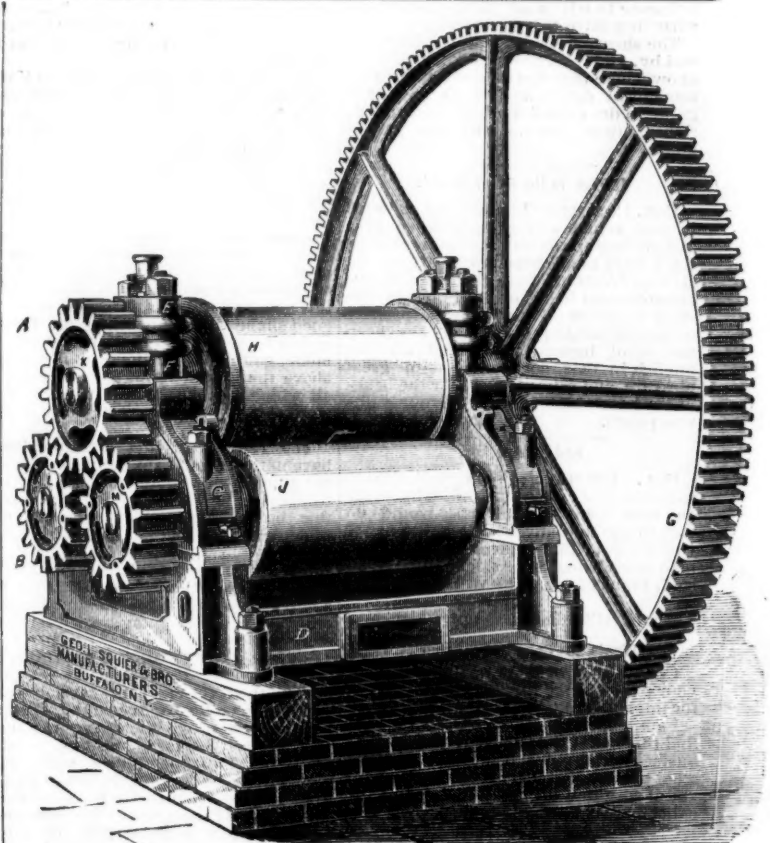
Mill Work.

BY E. W. DEMING OF THE LAFAYETTE SUGAR REFINERY.

There are more styles of mills than manufacturers; they range from 200 lbs. to 75 tons in weight, known as rigid, flexible and rubber cushioned, requiring from one horse to 125 horse power applied by sweep above or below, direct connection of a tumbling rod, belt, or direct gear. Many columns would be required to speak of the merits and demerits of each, especially at the latter; the writer has never seen a mill that did not have some weak spot. Horizontal mills are generally preferred to upright ones. The best sweep mills have the sweep below so space about the mill can be utilized for storing cane and spouting juice away. This is true of a tumbling rod connection except the latter requires no elevation of the mill. A good mill should have 3 rolls of nearly uniform size, plenty of iron with good housing and large stay bolts well secured to a foundation of either brick, mortised timbers or posts. Mill should be level, with no waste of juice about the edge of the juice pan.

Cane carriers cannot well be used on mills having less than 2 foot rolls and larger mills cannot well maintain a steady, even feed without a carrier. Bagasse carrier can be used to advantage on any sized mills.

The feed to any mill should be regular and even, preventing an undue strain to one part of a rigid mill and pressing equally well on a flexible mill, where if cane is bunched single stalks or thin layers are not pressed well. Cane in milling should be broken at every joint, and if milled it should be broken between the joints. The feed table on mills using a carrier should be at least 6 feet long with a slope of but 18 inches. If



THE LOUISIANA SUGAR MILLS, MANUFACTURED BY GEO. L. SQUIER, BUFFALO, N. Y.

more slope given, much trouble follows to prevent cane passing over the rolls.

Mills with 20 inch or larger rolls can handle unstripped cane and do better work than with stripped cane the leaves bind it together, draw it in even, prevent it stripping too fast and fills up the spaces between the stalks giving a good looking bagasse. If bagasse is used as fuel the leaves by drying quickly greatly assist in its combustion.

The mill should if possible expose some part of the bearing of each shaft. The strains on large mills are often so severe as to render nearly useless the common machine oils, something like the best grades of axle grease applied with a paddle being necessary to prevent friction and cutting.

In small mills where cane is not well cut up the return knife gives but little trouble; in large mills the strength of the knife and its proper setting often causes much trouble and delay. The edge of the knife should rest firm against the roll.

The first indication of a misplaced knife being when cane leaves bagasse roll in wads—this severely strains a mill, have known it to bring four horses to a dead stop.

The juice should fall from the mill into a metal pan and be discharged into a tank through an open trough. If this trough is 12 inches wide and 6 feet long, with a fall of one foot with a piece of perforated zinc (holes 1-16 of an inch in diameter) secured one inch from the bottom, it will remove all trash, leaves and pieces of cane, requiring but little care for a strainer.

West Point, Ind., Jan. 2nd, 1884.

To the credit of sorghum sugar it may be said the northern cane is ripened in ninety days from time of sowing, while the southern sugar cane consumes ten months. Experts claim that nearly as great weight of sugar per acre can be secured from sorghum as from the Southern cane.

The Best Advertising Medium.

There are probably but very few persons in this country identified with the northern sugar cane industry, either as cultivator or manufacturer, who do not from week to week very carefully read the RURAL WORLD seeking the latest and the best information published in regard to that industry. There is no paper published that is read so thoroughly (or is taken as higher authority) by sorghum growers. Seed growers and manufacturers of implements and machinery therefore find it the best channel they can use through which to make their announcements.

The old saying, no grass no cattle, no cattle no manure, no manure no crops, is as true to-day as when first spoken. Grass takes care of him who sows it.—The meadow is the master mine of wealth.—Strong meadows fill big barns.—Fat pastures make fat pocket.—The acre that will carry a steer carries a stock.—Flush pastures make fat farmers.—Up to my ears in soft grass laughs the fat ox.—Sweet pastures make sound butter.—Soft hay makes strong wool. These are some of the maxims of the meadow. The grass seed to sow depends upon the soil and here every man must be his own judge. Not every farmer, however, knows the grass adapted to his soil. If he does and seeds by the bushel, or other measures, he is apt to be misled.

The time has come for those who contemplate putting in steam sets for making sirup and sugar the coming season to be making contracts for machinery. Among the many sizes of steam mills made by Geo. L. Squier of Buffalo, N. Y., perhaps none are more popular than the LOUISIANA MILLS represented by the above cut. These mills are used by the Lafayette Sugar Refinery, the Jefferson Sugar Co., Clinton Bozarth, N. K. Stout, D. S. Martin, Dr. F. B. Sherburne, Babbitt & Beatty, and many other veterans in the business who know what a good mill is, and all speak of them in the highest terms. They were originally constructed for the tropical cane and were first used in Louisiana, where they gave great satisfaction, and now they are in use in the West Indies, Mexico, South America, and throughout the tropical world.

A great feature in the mills made by Geo. L. Squier is the fact that they extract 30 to 35 per cent more juice than other mills, as has been repeatedly shown by weighing the cane and juice. At the late Cane Growers' Convention in Indianapolis Prof. Wiley stated that he got less than 42 per cent of juice at Washington with a Colwell Mill, and that the Rio Grande Co., with a five roller mill got only 47 per cent, while with the No. 2 Louisiana at Lafayette he averaged 67 per cent. There is an abundance of other evidence corroborating the same fact. Any cane grower can easily figure up for himself the extra value of a mill that will extract nearly or quite half more juice.

As the chief trade of Mr. Squier is in the tropics every mill he manufactures is made extra strong for the tropical cane, and hence there is no comparison between his mills and the western sorghum mill in strength, freedom from breakage, capacity of work and the amount of juice they will extract. Most of the leading northern cane growers have found this out and will use no other mills but his, and all cane growers ought to examine his mills before deciding to buy any others. He manufactures over eighty sizes, so every one will be likely to find just the kind and size of mill to meet his needs. Catalogues and price lists, together with Profs. Weber & Scoville's Manual will be sent free on application to
GEO. L. SQUIER,
Buffalo, N. Y.

Champaign, Ill., is the headquarters of the sorghum industry of that State, and the last season has been the most unfavorable one for it in thirty years, yet the Champaign Sugar Company, with a paid up capital of \$50,000, has succeeded fairly well. They raised 1,435 tons of cane on 145 acres, which, with what they obtained from farmers, summed up an aggregate of 2,400 tons, from which they obtained 160,000 pounds of sugar and 40,000 gallons of sirup. This amount of product indicates a yield of sixty-five pounds of sugar to the ton of cane and 650 lbs to the acre, and six gallons of sirup to the ton and sixty to the acre, in any average year. The company are well satisfied with the result, and have arranged to raise 300 acres of cane next year. The capacity of the factory is equal to about 12,000 tons per annum. They have ascertained that the land steadily improves under sorghum culture—a surprising result.

Save Your animals much suffering from accidents, cuts and open sores, by using Stewart's Healing Powder.

The Shepherd.

The Wool Industry.

For many months past it has been the duty of the RURAL WORLD to point out the inconsistency of wool men sending their product 1200 or 1500 miles east to a commission merchant for sale, wait thirty to sixty days for report of sale and after that from sixty to ninety days for the money. We have seen the evidence of this inconsistency a number of times but it was never better illustrated than has been done in our own columns within the past three or four weeks, and, indeed, in this issue.

When wool growers testify that by sending their wool to St. Louis they get their money in three or four days, and four to five cents more for it than others got who sent it east and waited as many months ere they got their money, we think we have shown the propriety of the course we have suggested and the propriety of its adoption. The question is yet open for discussion, and we court the opinions of all within reach of our influence to tell what they know and what they have to suggest.

The shearing season will be here by and by, and wool growers will want to know where they can do best; and whilst some have determined what they are going to do, guided by their past experience, others have not and are yet in doubt.

It Pays in the Rural World.

COL. COLMAN: In renewing my card in your valuable paper for another year and closing up the last year's sales I must say it pays to advertise, especially in the RURAL WORLD. I am glad to see the improvement being made in it, in the stock interest of all kinds, but especially in that pertaining to sheep and the sheep and wool interest. We read all you publish in that connection with great pleasure and return thanks for the benefit we have obtained through your valuable paper.

SAM. JEWETT & SON.

And yet Another.

COL. COLMAN: I am well pleased with the RURAL WORLD and think every one who wants to advertise would do well to use the advertising columns of your paper. In my advertisement please take out 400 bucks for sale, they are all sold, thanks to the RURAL WORLD.

D. W. MCQUITT.

Hughesville, Pettis County, Mo.

Wants to Come to Missouri.

COL. COLMAN: As a subscriber of your paper I take the liberty of asking for information through its columns. I am engaged in sheep-raising, but find this is not the place to make that business profitable. Would like to know what part of Missouri is best for sheep, and if sorghum does well in the same locality? It is very cold here.

ELFORD JEWETT.

Glidden, Ia., Jan. 3d, 1884.

Any portion of South Missouri is well adapted to the raising of sheep and the production of sorghum. Besides which all kinds of fruits do admirably. When you get ready to select a place call at the RURAL WORLD office, and full particulars will be given.

Sheep in Southern Missouri.

EDITOR RURAL WORLD: Thinking it might be of interest to some of your readers to hear something more of Southern Missouri as a sheep country, I have concluded to give my small experience.

On account of poor health, I was last spring, induced to come from Illinois to Southern Missouri, and give my attention partly to sheep raising. With the same object in view, I visited Kansas three years ago. In my opinion this country has better advantages over that; stock are better protected by the growth of timber in the winter from the cold winds, and in summer from the sun, and the wild range seems to be almost as good, and does not seem to dry out, as the prairie, during drought.

My sheeps are in good condition and have almost wholly made their living on the range to the present date. I do not think that parties looking out a location for a sheep farm or ranch can find a better location, if he is willing to deprive himself of the convenience of railroads, and the high-toned accomplishments of society. Willow Springs on the K. & C. & G. R. R., our nearest railroad point, 25 miles; Salem, on the St. L. & L. R. R., is 40 miles from us.

Several sheep men have come into the country in the past year. Some are sowing tame grasses and making pasture—prefer this, to looking after their sheep on the range. Good land suited for grazing purposes can be secured at a very small price, and rich valley land at reasonable prices.

I see some one is making enquiry about R. M. Bell; he is here in all his glory, has a fine flock of thoroughbred Merino sheep and thinks this is the finest sheep country to be found. We can also raise as fine fruit, as fine potatoes and as fine sorghum as any country.

For fear my article will not be permitted space I will close. W. F. W. Summerville, Mo.

A Sure Cure For the Dog Nuisance.

EDITOR RURAL WORLD: I hear much complaint of dogs killing sheep, and many ways suggested to abate the evil. While most of the plans proposed are good, as far as they go, I do not think any of them reach the root of the evil. The trouble with all the laws enforced, and all the laws proposed by the writers on this topic, is that they do not reach the root of the evil, but attack the outer branches. I think a law covering the following points would work perfectly:

First. Tax all dogs one dollar a year, and issue badges to all paying the tax, to be worn on the collar. Make it the duty of certain officers to kill all dogs not wearing badges, and let it be lawful for anybody to kill any dog not wearing a badge, wherever and whenever found. The law, as it now stands and is administered in all States, that I know of, does not reach the dogs that do the mischief. The assessors get only those dogs belonging to property holders, who, as a rule, are well-fed, and usually of some value; but the dogs that belong to the poor and shiftless floating population (who usually own the most dogs), are very seldom on the assessors' books, and these dogs, being but poorly fed, or not at all, are compelled to get their living as best they can, and to this class most of the sheep-killers belong.

Now, it is evident that, with such a law as proposed, it will be in anybody's power to rid the country of the dogs that scarcely ever pay the tax, yet are the very ones that do the mischief, and make sheep husbandry so insecure and unsatisfactory, as it is in very many sections, that would, but for the dog nuisance, be one of the pleasantest and most profitable industries. E. A. RIEHL.

Sheep and Wool.

COL. COLMAN—Dear Sir: The year 1883 is past. The new year, 1884, is with us, with its fresh and biting experience of extreme cold—colder than ever known, so say some—Saturday morning, 30° to 38°, say some of the thermometer readers.

Certain, it is, that the coming year will be to the practical farmer like all other years, with its fresh and biting experience of extreme cold—colder than ever known, so say some—Saturday morning, 30° to 38°, say some of the thermometer readers.

But I didn't take my pencil for the purpose of troubling you or your readers with generalities of any kind, but I desire to add something to my previous talks about sheep and wool. I notice in a recent number of the RURAL, some statements from Jewett and McCully, as to their experience in marketing wool in Boston, etc.

During one of my recent trips to Kansas I fell in company with a gentleman from New York, who, with his sons, have farms in Wabasha Co., and who have made a decided success of sheep-raising and wool-growing in the locality. As he related it to me, the experience of his neighbors and numerous other parties throughout the State was precisely the same as detailed by Jewett and McCully. The parties who entrusted their wool to an agent to go to Boston were subjected to annoyance and delay, while this man and his sons put their wool in good shape and shipped it to St. Louis, and in four days had their money safe at home, getting a price four or five cents above the Boston ventures—the moral of all which can be found in these few words—"A home market against the world."

The readers of this correspondence have noticed that I am inclined to take the gloomy view of the sheep and wool business as now existing in this country; that the business is sick there is no use of denying. A Kansas City market report says, "550 sheep at 75c a head. I saw a flock that was sold for 75c, and a friend writes, 'We have finally sold for a dollar.' I won't trouble you further, only to add this clipping, which tells the story well:

"SARATOGA, Kas. Dec. 14.—A few facts in the form of a short sketch concerning sheep husbandry on the Western prairies may prove interesting to a portion, at least, of many readers. About the year 1870 pamphlets containing glowing accounts of the immense profits to be derived from sheep husbandry on the prairies of the great West appeared. Evidently they were written by hired literary geniuses, and were freely distributed by interested railroad corporations. As before stated these pamphlets told glibly how a stated investment in sheep was sure to bring its reward. They even gave the figures (for 'figures won't lie'). They gave the price of sheep per head, the cost of keeping, etc., and, after adding, dividing and subtracting, they wound up with a profit of 75 per cent. Need it be said that these pamphlets were successful missionaries?

Persons from all parts of the country flocked to the unoccupied grazing lands of the West to make their fortunes out of wool and mutton in a few years, then to return to their former homes and live in luxury 'the rest of their natural lives.' Thousands of sheep were shipped and driven from different portions of the country to this unoccupied territory, and flocks were shipped from the Eastern States, and this 'infant industry' began to assume massive proportions. All went merry for a few short years, when the 'boom' began to subside and a portion of the weak-kneed flock-masters began to realize that all that is white is not wool. They found to their sorrow, after a year or so of unsuccess, that figures in this case, were the boldest kind of falsifiers. The very dullest of these imported sheep husbandmen soon discovered that it required the strictest attention and the best of care to produce even one-half the profits as set forth in the fabulous railroad pamphlets. It may be well to state that the majority of these flock-magnates have sold or returned to their former haunts poorer, and it is to be hoped, wiser individuals.

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Flock-owners generally begin to realize that plenty of good feed and proper protection from storms are almost indispensable auxiliaries to success. The wild grasses of our Western prairies are admirably adapted to the wants of sheep, but range alone must not be depended on for winter feed, or disappointment and loss are sure to follow. Both fodder and root-crops can be grown in most parts of the West, and generally there is no plausible reason why Western sheep should not have the benefit of good, wholesome food. The principal drawbacks to successful sheep-raising here at present are: First, the enormous prices charged by railroad companies for carrying our wool and mutton to market; second, diseases known as scab and grub; third, prairie wolves. If some of our intelligent legislators will help us to stamp out the first-named of these drawbacks, then they can do as they please with the tariff on wool.—E. J. C. L. B. M. Adrian Co., Mo.

Remedy for Worms.

EDITOR RURAL WORLD: Seeing enquiries in the last two papers for a cure for worms in sheep, I thought I would give my plan of treatment. I have had great success with it during the last eight years. Copperas, soda and salt will destroy all internal parasites in sheep. My rule is 1-4 lb. copperas, 1 lb. soda to 1 peck of salt, all thoroughly pulverized and mixed. I would mix only half the above quantity at a time for two hundred sheep. Sheep eat it better when fresh mixed. I feed it about twice a month a preventive of all ailments in sheep, but would feed it all the time for a month or so to sheep that were known to be troubled with worms. It is surprising how quickly sheep will get over the snuffles after feeding it. It is a great sheep remedy. I hope your correspondents will try it and report results. I am wintering two hundred head

of sheep on shock corn alone. They are doing finely, and are perfectly healthy. C. E. H.

New Albany, Kansas.

At Death's Door.

Rev. J. H. Richards, of South Haven, Mich., gives us, under date of June 14th, 1882, the following account of what Compound Oxygen did for an old lady seventy years old, who, a year ago, was at death's door:

"Compound Oxygen has done a fine work here in the person of a lady near seventy. She had a pulmonary attack, coughed incessantly and became greatly reduced in fact was completely prostrated. The physicians said that they could do no more for her, and that her end was at hand. She used, after this one treatment and was so much relieved that she could endure life. But in two or three months she was again at death's door. Her family were called in to say farewell, and she gave them her dying charge. But not really dying, one of the daughters asked if the Compound Oxygen had ceased to do her good. 'Oh no,' she replied, 'but I have been without it for some time.' A treatment was immediately procured. This was about one year ago. Now she is doing well, and her family and going out visiting in her carriage for miles in the country."

Our "Treatise on Compound Oxygen," containing a history of the discovery and mode of action of this remarkable curative agent, and a large record of surprising cures in Consumption, Catarrh, Neuralgia, Bronchitis, Asthma, etc., and a wide range of chronic diseases, will be sent free. Address, Drs. Starkey & Felen, 1109 and 1111 Girard St., Phila.

"T. R."—You ask why we do not print your sonnet. Because you have not sent five cents per line. A sonnet contains fourteen lines. That makes \$3.50. If you want the sonnet, it will be fifty cents more.—(San Francisco Argonaut.)

Mother Swan's Worm Syrup, tasteless effective; 25c.

DR. JOHN BULL'S Smith's Tonic Syrup FOR THE CURE OF FEVER and AGUE Or CHILLS and FEVER, AND ALL MALARIAL DISEASES.

The proprietor of this celebrated medicine justly claims for it a superiority over all remedies ever offered to the public for the SAFE, CERTAIN, SPEEDY and PERMANENT cure of Ague and Fever, or Chills and Fever, whether of short or long standing. He refers to the entire Western and Southern country to bear his testimony to the truth of the assertion that in no case whatever will it fail to cure if the directions are strictly followed and carried out. In a great many cases a single dose has been sufficient for a cure, and whole families have been cured by a single bottle, with a perfect restoration to the general health. It is, however, prudent, and in every case more certain to cure, if its use is continued in smaller doses for a week or two after the disease has been checked, more especially in difficult and long-standing cases. Usually this medicine will not require any aid to keep the bowels in good order. Should the patient, however, require a cathartic medicine, after having taken three or four doses of the Tonic, a single dose of BULL'S VEGETABLE FAMILY PILLS will be sufficient.

BULL'S SARSAPARILLA is the old and reliable remedy for impurities of the blood and Scrofulous affections—the King of Blood Purifiers.

DR. JOHN BULL'S VEGETABLE WORM DESTROYER is prepared in the form of candy drops, attractive to the sight and pleasant to the taste.

DR. JOHN BULL'S SMITH'S TONIC SYRUP, BULL'S SARSAPARILLA, & BULL'S WORM DESTROYER, The Popular Remedies of the Day.

Principal Office, 331 Main St., LOUISVILLE, KY.

A-GREAT-PROBLEM TAKE ALL THE Kidney and Liver Medicines BLOOD PURIFIERS, RHEUMATIC REMEDIES, Dyspepsia And Indigestion Cures, Ague, Fever, And Bilious Specifics, Brain and Nerve Force Revivers, Great Health RESTORERS.

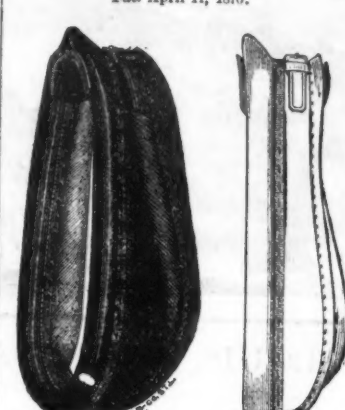
IN SHORT, TAKE ALL THE BEST qualities of all these, and the best qualities of all the best Medicines of the World, and you will find that **HOP BITTERS** have the best curative qualities and powers of all concentrated in them, and that they will cure when any of these, singly or combined, fail. A thorough trial will give positive proof of this.

OUR
No. 1 Plantation Saw Mill,
\$2000
(SEND FOR DESCRIPTIVE CIRCULARS.)
SMITH, MYERS & SCHNIER,
323, 325, 327 & 329 W. Front St.,
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Mention This Paper.

ARGENTINA FARMS & MILLS
For Sale and Exchange, 62½ W. Front St.,
R. B. CHAFFIN & CO., Richmond, Virginia

35,000 NOW IN USE. THE HORSE'S FRIEND, Spooner's Horse Collar.

Pat. April 11, 1876.



Prevents chafing; cannot choke a horse.
Ask your Harness Maker for it.
Address J. B. SICKLES' SADDLERY CO., St. Louis, Mo.

360 ACRE FARM FOR SALE!
All in cultivation and grass except thirty acres of timber. Good house and barn and other buildings. A fine pond, water, hedge fences, orchard and five pastures, hedge nine miles west of Sedalia. It is one of the best farms in Missouri. For further particulars address M. M. Pemberton, Lamonte, Pettis County, Mo.

CHEAP HOMES Arkansas & Texas.

Along the line of the St. Louis, Iron Mountain & Southern Railway, Texas & Pacific Railway and International & Great Northern Railroad, are thousands of acres of the choicest farming and grazing lands in the world, ranging in price from \$2.00 to \$3.00 and \$4.00 per acre, in a healthy country, with climate unsurpassed for salubrity and comfort. Send your address to the undersigned for a copy of statistics of crops raised in Arkansas and Texas, in 1882, and make up your mind to go and see for yourself when you learn that the crop for 1883 is 50 per cent. larger than that of 1882.

To those purchasing land owned by the Company, and paying one-fourth, one-half, or all cash, a proportionate rebate is allowed for money paid for tickets or freight over the Company's lines.

H. C. TOWNSEND,
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HOGS
AND
POULTRY

Dr. G. W. Hoffman's Hog and Poultry Remedy and preventive. It expels the poison from the system, puts the stock in fine condition, fattens, economizes the food and at market brings the greatest profit. It regulates the system, preserves the appetite, aids digestion, prevents cholera, typhoid, dysentery, and all other diseases. Price, \$1.25. Ask your druggist or send for it and circular. Agents wanted. Address G. W. HOFFMAN, 69 East Washington street, Indianapolis, Ind.

THE FARM, FIELD AND FIRESIDE has now over 100,000 actual subscribers. Being discontinued another award of \$200,000 to be made on May 1st, 1884. The award of \$40,000 just completed by us fully establishes our reputation and we will continue to make the same until we have reached our goal of 200,000 subscribers. We are now the largest and best established of any paper of its kind in the world. We distribute the \$200,000 that we shall get for this year already large list, and in order to secure them we propose to distribute the \$200,000 in the form of a valuable prize, and we will send you one of these prizes before we have reached our goal of 200,000 subscribers. In our new award to be made on May 1st, we have a larger number of cash prizes than for any one or two persons to get the bulk of the award. We are positive that this plan is better than any other plan. See the names of the winners of the \$200,000 award in the last issue of the FARM, FIELD AND FIRESIDE. We will enter your name on our subscription books and mail you the new edition—enlarged to 32 pages—of the FARM, FIELD AND FIRESIDE regularly for one year and immediately send a Printed Numbered Receipt which will entitle the holder to ONE of the following presents to be given away May 1st, 1884:

THE List of Presents to Be Given Our Subscribers:

50 U. S. Government Bonds of \$100 each.....\$5000
100 U. S. Greenbacks of \$20 each.....2000
100 U. S. Greenbacks of \$10 each.....1000
100 U. S. Greenbacks of \$5 each.....500
100 U. S. Greenbacks of \$2 each.....200
100 U. S. Greenbacks of \$1 each.....100
500 Silver Dollars.....500
500 Silver Half Dollars.....500
500 Silver Quarter Dollars.....500
500 Silver Dimes.....500
500 Silver Pennies.....500
500 Gold Pieces.....500
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500 Gold Quarter Pieces.....500
500 Gold Dimes.....500
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Horticultural.

[Judge Samuel Miller, Bluffton, Mo., will assist in conducting the Horticultural Department in this journal. Any inquiries addressed to him will be promptly answered through the RURAL WORLD.]

Whitewash and Sulphur.

EDITOR RURAL WORLD: I have washed my apple trees with whitewash in which some sulphur was put. Will it keep the rabbits off? In pruning, what shall I do when it is necessary to saw off limbs of considerable size?

J. S. N.
If that wash sticks, the rabbits will not touch the trunks of your trees. Whenever a limb of even one inch in diameter is cut off, it is well to paint the spot with flowers of sulphur mixed in linseed oil. It will preserve the wood from decay, and prevent the round-headed borer from laying its eggs there. When a limb of considerable size is cut off, it will pay to nail on a piece of shingle, if it faces upwards, as is often the case. Those large wounds first dry, then decay, and finally the wet gets into the tree, the result of which is diseased fruit that won't keep.

S. MILLER.

Treating a Hedge.

JUDGE MILLER: Will you please answer through the RURAL the following: What is the cheapest and best method of treating an "Osage hedge," to make a lasting fence that will turn anything? The hedge is now about seven feet high, and is not hog-proof; has been cut to the ground twice, and about two feet the third year. Respectfully,

STARK & CO.

Begin at one end and cut the Osage trees nearly through, one foot from the ground, and bend them down horizontally, leaving a few of the side limbs to support them in their place. This will keep hogs from getting through, and the upright shoots will come up thick enough to keep the D—" from going through. These laid-down canes, will not rot in five years, and will make a complete barrier. The thing will be unsightly, it is true, but it is about the only plan to make it hog-proof. I am no hedge man now. One had a quarter of a mile of complete hedge, half Honeysuckle, the best Osage orange, cut all down, because it injured a neighbor's crops for twenty feet out.

S. MILLER.

P. S.—Barbed wire is the hedge for me hereafter.

Preventing Rot in Concord.

A gentleman who has lost a number of crops of Concord by the rot and has become discouraged in trying to raise them, wrote to Judge Samuel Miller, of Bluffton, saying he thought he would dig them up or graft them to other varieties, and asked his opinion about it. Although the reply was not written for publication, yet we have taken the liberty to publish it, as the directions given may be of service to others. Judge Miller says:

As to your two acres of Concord, I would advise you to give them one trial more. Prune pretty closely, and about two weeks before blossoming have the ground perfectly clean, having previously carried out and burned every vestige of the prunings as well as all the loose bark taken off the vines. Then, as soon as the bunches show themselves, pinch the smaller ones off, leaving about one-third the number that show themselves. An over crop helps the rot. When the blossoming is over, and the fruit well set, sprinkle air-slacked lime over the ground pretty freely, and if some hits the vines it will do no harm. When the fruit is half grown give the vines a good sprinkling with water in which carbolic acid has been mixed in the proportion of one gallon of the acid to ten or fifteen of water.

All this will be some trouble but I believe it will pay. If the crop hits, you will have bunches of nearly one pound each, that will command double the price that ordinary grown Concord will bring.

This lime and carbolic acid affair I have read has secured a crop independent, so that to use both would give a double chance.

Tree Agents Again.

COL. COLMAN: The discussion of this subject may be getting a trifle monotonous to those who read the papers, as they generally think themselves fortified against impositions, and do all they can to warn their less informed neighbors; yet I begin to doubt if it ever will be generally well understood. Disposing of nursery stock through "Dealers," has been generally, and almost exclusively, practiced for the last 15 or 20 years, yet even such well informed men as Mr. S. Miller seem to confound, or not appreciate the difference.

A dealer bargains for such stock as he can get, on the best terms he can make, generally only straight, free-growing varieties, that will deliver well. Nurserymen can generally be depended on to label it true to name, especially when they well know how easily he can dispose of all deficiencies. From this he will furnish anything described in the co-operative western catalogue, or called for. He plants himself on the real trumped-up reputation of the nursery he works for, although the nursery is in no way responsible to his customers—has nothing to do with them. He will employ such methods as he finds most successful in procuring orders, and is continually astonished at his own audacity, and the ignorance and gullibility of his customers.

Of course, I don't approve of, or apologize for such methods, but there is no use in railing at them. We cannot hope to either reform or drive them out as long as they can find so many willing victims. Just so long as people will continue to pay for it, there will be plenty of men willing to serve and accommodate them, no matter how dirty we may consider the job. There are plenty of men in the world who would sacrifice some advantage to enjoy telling an unreasonable tale rather than the plain truth, and how could we expect them to forego this enjoyment, together with their bread and butter?

And it is a fact, that if you offer only the common sorts of fruit, such as are well known and admitted to be reliable, and such as well posted men would plant for the most of, for their own use or market, you can hardly be a very successful salesman. Call it the improved

Don Davis, New Russia, Borerproof Budded apples, for instance, and people will buy more, and pay for it. They are very liberal in paying high prices to dealers, but when they come to the nursery, or meet an agent with a printed price list, they must have first-class stock at scab prices, or it is "awful high, and they cannot afford it."

These are mostly the men who tell Mr. Miller and myself that they "have bought their last trees from agents," (meaning dealers). They delight in telling us how they have been swindled. They forget what a damaging reflection it is on themselves, in their anxiety to drive a more liberal bargain with us. My sympathy for them is "just out," and I will try to break them of calling for it, if I don't get "broke" or too disgusted myself.

At home, and where I have had agents a long time, I am not much annoyed now by claims to make up dead trees. Occasionally, I have had men to help dig and strip their trees in the fall, and then claim next year that there must have been something the matter with them, for they failed to grow. But we always have a serious struggle the second and third year at least, to maintain our ground, because we refuse to honor such claims, though we never agreed to, and so published to the world. There are men to-day doing their best to obstruct sales on this ground. Not any of your scallawags either, but men of high standing and much influence, which they think I must pay for, or leave their part of country, little thinking that it would damage me a great deal worse if they could say that I insure everything to grow.

Is it not very strange, that men who have grown and handled live plants and seeds all their lives, yet confessing themselves utterly unable to tell a live plant from a dead one in any other way than by watching it grow, can demand of us to risk their handling and planting them right, and that, too, without a cent of extra pay, or any agreement on our part? Is it any wonder if nurserymen have gladly turned over such customers to dealers as go-betweeners, or quit the business in disgust? Nor is it very strange if dealers have adopted methods to suit such customers. If the old adage that says "honesty is the best policy" is not a sham and delusion, as applied to making money or reputation, it is not for the want of such people trying to make it so.

CHAS. PATTERSON.

Kirkville, Mo., Jan. 1st, 1881.

Order of Ripening of 35 Varieties of Grapes at Dennison, Texas.

Mr. T. V. Munson, in the *Gardener's Monthly*, says that he finds the Champion is five days the earliest of any variety yet tested, little rot, very vigorous and productive, black, beautiful, about like Hartford, but sells, bringing from fifteen to twenty-five cents per pound, wholesale. Moore's Early, three to five days after Champion, larger than Concord with less rot and better shipper, equal in quality, vigor and productiveness, brings same prices with Champion. Lady, an exquisite large white grape, no rot, very tender, slow grower but hardy, ripens with Moore's Early. Prentiss, a medium sized translucent white grape, resembling foreign sorts in texture and flavor. Rots some, and vine not the healthiest, but a fair grower, ripens nearly with Lady. Perkins, a pink grape of great vigor, productiveness and good quality, though having a musky flavor like Concord, no rot, hangs to bunch well and a fine shipper, bringing same price in most markets with Delaware. Telegraph, black, good, ripens with Perkins, just ahead of Hartford, and much preferred to it, some rot. Early Victor, small to medium, fine quality, pulpy but not foxy, vigorous and productive, some rot, though claimed to be earlier than Champion; ripened with me on about a dozen different vines about the same time with Perkins. Emelau, excellent, large, purple or black, little rot, bunch long but rather straggling, owing to imperfect fertilization. Delaware does well here, little or no rot, highest quality as all know. Walter, a seedling of Delaware, much the same in quality, but vine more vigorous, bunch and berry larger, valuable. Brighton, vigorous, productive, much larger in bunch and berry than Delaware, and ripens with or just before it, best quality, rots to destruction. Black Eagle, one of the finest of black grapes, but worthless on account of rot. Wilder, (or Rogers No. 4) larger in bunch and bunch than Black Eagle, having the same falling. Lindley, (Rogers 9) Agawam, (No. 15) and Salem, (No. 22 or 33) all large early red grapes of high quality, vigorous, but rotting some. Prefer Lindley. Martha, greenish white, or golden when dead ripe, medium in bunch and berry, vigorous, productive, little rot, very sweet. Ives, I place here, although usually marketed with Hartford when it first purples, but is by no means ripe, and ruins the market for about ten days, otherwise a good comely fruit, from fine, vigorous and productive. Concord, all know it, rots severely some seasons, yet is the most popular grape. Lady Washington, sickly, delicate fruit, not high flavored, rots very badly. Irving, a splendid grape, almost up to Triumph, or the Foreign Chasselas, but rots, as do nearly all foreign kinds tried here. Montgomery, an American chance seedling, supposed to be from foreign seed, but shows hybrid signs, vigorous, productive and so far shows no rot, large bunch of medium berries, golden color, very promising of this class. Duchesse, a beautiful golden grape about the size of Delaware, of pure foreign quality, but rots badly, vigorous and productive. Elvira, a hybrid between the Labrusca and Riparia, both American species, greenish white, when dead ripe golden or purple, very vigorous, productive, and of high quality, little or no rot, but if a rain falls when it is near ripening, it cracks and is ruined, owing to the compactness of bunch. Noah, a seedling of Elvira, free from cracking, having a more open cluster, but is not so good as the other. Bunch of the bunch when ripe. Bacchus, an "improved" seedling of Clinton, which I cannot distinguish from the Jacent, except the saccharometer shows more sugar for wine. Triumph, a most remarkable grape in vigor of vine and size of bunch and berry, color golden, quality equals the best Chasselas, rarely ever shows any rot; very prolific. Goethe (Rogers No. 1) the best of all Rogers kinds, a pink color when ripe, berry large size, very little rot. Cynthiana, undistinguishable in vine and fruit from Norton Virginian, but said to make better wine, never rots, hardy and productive, small black,

and makes the very finest of red wine. Post Oak No. 1, found wild in the woods near Dennison, berry small to medium, black, compact in bunch, vigorous and productive, like Cynthiana, free from rot and fine for wine. Herbermont, the great southern grape, doing wonderfully in all the Gulf states, and as high up as Central Missouri. Old vines near Griffin, Georgia, have bodies a foot in diameter. Bears immensely large clusters of the most sprightly, high flavored, pulpy fruit, rots some seasons, but comparatively free from that scourge. Seedling, produced by myself from Herbermont seed fertilized with Triumph, white or delicate pink when ripe, tough, thick transparent skin, cluster large, berry medium to large, exceedingly sprightly and delicate flavor, no pulp, melting away in the mouth like honey, vine like its parent Herbermont, very vigorous, ripening earlier than either parent a few days. First fruit borne, no signs of rot.

Horticultural Notes.

—It is possible and advisable in many cases to combine direct profits from fruits with the other advantages to be derived from the raising of forest trees. A nut orchard, for instance, is not an unprofitable combination of profit and forestry. We have in mind a small orchard of this kind made up of black walnuts, butternuts, hickory nuts, chestnuts, etc. Such trees are not difficult to grow if transplanted when young, and are set on rich soil.

—Mr. Russel Heath, Carpenteria, Cal., has an "English walnut orchard" of two hundred acres of rich, level land, near the seashore. The trees are from ten to twenty-five years planted. His crop in 1880 was 630 sacks of 70 pounds each; this season he expects the harvest will aggregate about one-third more.

THE CHESTNUT.—One of the most promising trees for forest culture, where the conditions favor, is the American Chestnut. It grows spontaneously from New Hampshire to Carolina, and from the eastern slope of the Alleghenies to the Western prairies. Not only is this tree valuable for its nuts, the production of which begins in a very few years from planting, but the timber is valuable for planing; it is also admirable for house finishing, the color and grain of the wood being very attractive.

NEEDS OF ASPARAGUS.—The Country Gentleman says two things are necessary for the growing of good asparagus, namely, plenty of room for the plants to grow, and copious manuring. The latter is applied to thick beds by covering the whole surface with manure two or three inches thick, late in autumn, and forking it in very early in spring, before the new shoots start. Thick beds, however, should not be planted, but the plants allowed three or four feet each way to each. Three by five is a common and suitable distance, and large stalks may be obtained in this way.

—A Norwegian botanist states that most plants in high latitudes produce larger and heavier seeds than in regions nearer the equator—an effect which he ascribes to the prolonged influence of sunlight during the summer days in high latitudes. In some cases the difference of seed-development is astonishing. Dwarf beans taken from Christiania to Drontheim—less than four degrees farther north—gained more than 60 per cent. in weight; and daisies from Lyons when planted at Drontheim showed a gain of 71 per cent. The leaves also of most plants are larger and more deeply colored in higher latitudes. The same is true of flowers, and many which are white in southern climates become violet in the far north.

HOW TO FERTILIZE FRUIT TREES.—An uncredited excerpt says that here and there on all farms, and most fruit gardens, will be seen an occasional tree or grapevine which seems to lack vigor—does not grow well, and yet seems to have no particular disease. The probabilities are that the tree is dying of starvation, and needs a liberal supply of food. When you give it this ration, do not pile a load of manure around the trunk of a tree or the body of a grapevine. This is just the place where it will do the least good. Near the trunk of the tree the roots are all large, the fibrous roots, the feeders, are farther off near the ends of the roots. These only can take up the nutriment. It is always safe to assume that the roots extend as far from the trunk in every direction as do the limbs of the tree, and to properly fertilize, spread the manure all over that area. Then fork it in, and you have done a good work and done it well.

A PROFITABLE ORCHARD.—A local paper gives an account of the apple orchard of Christopher Shearer, of Berks county, Pennsylvania, which appears to owe its success to the copious manuring which the land received before the trees were planted. He has tested commercial fertilizers, but finds them of little value compared with stable manure, which he continues to draw for his farm five miles, at the rate of over a thousand loads per annum, at a price of more than a dollar a load. On such heavily manured land he has had 400 bushels of potatoes and four tons of hay per acre. His apple trees are largely Baldwins. By means of his retarding house, which will hold 3,000 bushels, he keeps the apples from April to July, and sells them at from one to two dollars a bushel. This retarding house is built of heavy double walls of masonry, and is kept near the freezing point at all times by means of a large supply of ice. It appears to us to have been needlessly expensive, costing five thousand dollars, and requiring over a thousand tons of ice to fill the portions devoted to it. Doubtless, however, the industrious and enterprising owner makes it pay. Besides the apples sold, he makes yearly 10,000 gallons of vinegar, worth ten cents a gallon; he has 3,000 peach trees, obtaining valuable returns from his Bartlett pears; and his Crescent strawberry yielded over 100 bushels per acre. New strawberry plantations are prepared by giving thirty tons of manure per acre, and twenty-five tons are yearly added.

"ROUGH ON RATS" clears out Rats, Mice. 15c.

Under drill: Young and fashionable wife (to very plain and old-fashioned husband)—"Now, my dear, before I forget it, let me remind you that at our dinner to-day I wish you to omit those horrid tales of yours about how you went barefoot when a boy, and do try to have a little more style than an Egyptian mummy."—[Harper's Bazar.

HYPOCHONDRIA.

The Mysterious Element in the Mind that Arouses Vague Apprehensions—What Actually Causes It.

The narrative below by a prominent scientist touches a subject of universal importance. Few people are free from the distressing evils which hypochondria brings. They come at all times and are fed by the very flame which they themselves start. They are a dread of coming derangement caused by present disorder and bring about more suicides than any other thing. Their first approach should be carefully guarded.

Editor Herald: It is seldom I appear in print and I should not do so now did I not believe myself in possession of truths, the revelation of which will prove of inestimable value to many who may see these lines. Mine has been a trying experience. For many years I was conscious of a want of nerve tone. My mind seemed sluggish and I felt a certain falling off in my natural condition of intellectual acuteness, activity and vigor. I presume this is the same way in which an innumerable number of other people feel, but like myself are physically below par, but like thousands of others I paid no attention to these annoying troubles, attributing them to overwork, and resorting to a glass of beer or a milk punch, which would for the time invigorate and relieve my weariness.

After awhile the stimulants commenced to disagree with my stomach, my weariness increased, and I was compelled to resort to other means to find relief. If a physician is suffering he invariably calls another physician to prescribe for him, as he cannot see himself as he sees others; so I called a physician and he advised me to try a little chemical food, or a bottle of hypophosphates. I took two or three bottles of the chemical food with no apparent benefit. My lassitude and indigestion seemed to increase, my food distressed me. I suffered from neuralgia pains in different parts of my body, my muscles became sore, my bowels were constipated, and my prospects for recovery were not very flattering. I stated my case to another physician, and he advised me to take five to ten drops of Magendie's solution of morphia, two or three times a day, for the weakness and distress in my stomach, and a blue pill every other night to relieve the constipation. The morphia produced such a deadly nausea that I could not take it, and the blue pill failed to relieve my constipation.

In this condition I passed nearly a year, wholly unfit for business, while the effort to think was irksome and painful. My blood became impoverished, and I suffered from incapacity with an appalling sense of misery and general apprehension of coming evil. I passed sleepless nights and was troubled with irregular action of the heart, a constantly feverish condition and the most excruciating tortures in my stomach, living for days on rice water and gruel, and, indeed, the digestive functions seemed to be entirely destroyed.

It was natural that while in this condition I should become hypochondriacal and fearful suggestions of self-destruction occasionally presented themselves. I experienced an insatiable desire for sleep, but on retiring would lie awake for a long time tormented with troubled reflections, and when at last I did fall into an uneasy slumber of short duration, it was disturbed by horrid dreams. In this condition I determined to take a trip to Europe, but in spite of all the attentions of physicians and change of scene and climate, I did not improve and so returned home with no earthly hope of ever again being able to leave the house.

Among the numerous friends that called on me was one who had been afflicted somewhat similarly to myself, but who had been restored to perfect health. Upon his earnest recommendation I began the same treatment he had employed but with little hope of being benefited. At first I experienced little, if any, relief, except that it did not distress my stomach as other remedies or even food had done. I continued its use, however, and after the third bottle could see a marked change for the better, and now after the fifteenth bottle I am happy to state that I am again able to attend to my professional duties. I sleep well, nothing distresses me that I eat, I go from day to day without a feeling of weariness or pain, indeed I am a well man, and wholly through the influence of H. H. Warner & Co.'s Tippecanoe. I consider this remedy as taking the highest possible rank in the treatment of all diseases marked by debility, loss of appetite, and all other symptoms of stomach and digestive disorders. It is overwhelmingly superior to the tonics, bitters, and dyspepsia cures of the day, and is certain to be so acknowledged by the public universally. Thousands of people to-day are going to premature graves with these serious diseases, that I have above described, and to all such I would say: "Do not let your good judgment be governed by your prejudices, but give the above named remedy a fair and patient trial, and I believe you will not only be rewarded by a perfect restoration of health, but you will also be convinced that the medical profession does not possess all the knowledge there is embraced in medical science."

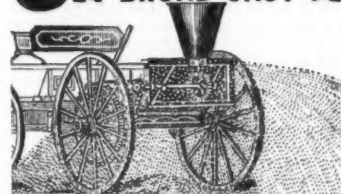
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EARLY AMBER CANE SEED For Sale. For price, address X. K. STOUT, Troy, Kansas. My seed was saved with great care by going through the field and selecting the very best heads.

STROWBRIDGE BROAD-CAST



SEED SOWER

THE BEST, CHEAPEST AND SIMPLEST. Sows all grains, grass seeds, lime, salt, ashes, fertilizers and everything requiring broadcasting in quantity per acre, better and faster than by any other method. Sows seed by sowing it perfectly even. Sows single or double cast, all on either side of the wheel. Not affected by wind, as the seed is not thrown up into the air. Vertically simple. Readily attached to any wagon. Lasts a lifetime. Can be used where there is no wind. One-fourth of an acre sows four acres of wheat. Crop one-fourth larger than with drill. Send stamp for circular giving terms and particulars. Mention this paper. C. W. DORR, Treasurer, RACINE SEED CO., Des Moines, Iowa.

FERRY'S SEED ANNUAL FOR 1884

Will be mailed FREE to all applicants and to customers of last year without ordering it. It contains illustrations, prices, descriptions and directions for planting all Vegetable and Fruit Seeds, Plants, etc. Invaluable to all. D. M. FERRY & CO., DETROIT, MICH.

PURE CANE SEED.

I have for sale a limited amount of Early Amber, Early Orange, and Link's Hybrid Cane Seed. This seed is thoroughly ripened, hand-picked and selected from the cane that yielded the largest amount of cane sugar. Price, delivered here, 7 cents per pound. M. SWENSON, Supt. Kan. Sug. Ref'g Co., HUTCHINSON, KAN.

EARLY AMBER and EARLY HYBRID CANE SEED. 300 bushels of the Early Amber and 25 bushels of Early Hybrid for sale. The Hybrid seed has been tested two years and has proved to be from 10 days to two weeks earlier than the Amber. Price for Hybrid 20 cts per bush. Amber, strictly pure, and weighs 60 lbs. per bu., 10c per lb. 54 cts per bush. C. J. REYNOLDS, Corning, New York.

SEEDS for EVERYBODY

Before purchasing your FIELD and GARDEN SEEDS for 1884, send for my large illustrated Catalogue, free to all, and see what choice seeds for the field and garden. Everything tested. Prices low. Cash prices. EDW. F. CLOUD, KENNETT SQUARE, PA.

HANSELL the earliest and BEST valuable Raspberry. Large, bright crimson, very firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Blackberry. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Strawberry. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Currant. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Gooseberry. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Elderberry. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Huckleberry. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Mulberry. Large, firm, productive, extra hardy, North and South. EARLY HARVEST, the earliest and most valuable Persimmon. 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COLMAN'S RURAL WORLD

THIRTY-SIXTH YEAR.

BY NORMAN J. COLMAN

PUBLISHED WEEKLY AT

ONE DOLLAR PER YEAR.

ADVERTISING: 40 cents per line of space; no reduction on large or long time advertisements.

Address NORMAN J. COLMAN, Publisher, 600 Olive Street, St. Louis, Mo.

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WE sometimes send sample copies of the RURAL WORLD to persons who are not subscribers, hoping that those who receive them will be so well pleased with the paper as to wish to subscribe for it. It costs only one dollar a year, which is less than two cents a week. Remit one dollar and get its value many times over during the year.

We particularly call the attention of our readers to the new premiums published in another column, and hope that many of our readers will avail themselves of this extraordinary opportunity to become possessed of some of the works of the best authors at the lowest prices ever offered before. Bear in mind this offer lasts for thirty days only, so that those who desire to avail themselves of this special opportunity, must be up and doing at once.

SEVERAL leading fruit growers from this county whom we have met the past week assert that they do not believe a peach bud remains alive or will survive the late cold snap.

JUDGE SAMUEL MILLER writes us from Bluffton, under date of January 5th, "mercury thirty degrees below zero this morning and of course all the peach buds and most of the grapes are killed."

A MEETING of farmers interested in Enslage will be held at 55 Beekman street, New York, office of the N. Y. Plover Company, Wednesday, Jan. 23d, at 12 o'clock. All interested in the subject are invited to attend without further notice.

THE Victoria hog, one of the new ones, will from henceforth be found advertised in our breeders' column. Mr. Shimer comes to us well recommended, and we know that the Victoria is an excellent hog. Those who wish may write him.

Once more we have to apologize to the writers of the Home Circle because of the occupancy of their page by irrepressible Texans. Those Southern men will come to the front every once in a while to tell us what they have, and how they are building up the biggest State in the Union.

MR. L. A. GOODMAN, secretary of the Missouri State Horticultural Society, writes that the cold weather of the 5th inst.—26 degrees below zero—killed all the peach buds in his part of the country, that the pear and cherry buds are also somewhat injured. The blackberry and the raspberry are also injured. Apples are all right yet. He writes from Jackson County, Mo.

THE Elmira, N. Y., *Husbandman* was one of the first papers in the Grange field and it has always deserved its great popularity. Its circulation in New York is very general and it makes a good showing outside the home state. The various departments are ably conducted. The discussions of the Elmira Farmers' club alone are worth the price of the paper. Published by the *Husbandman* association Elmira N. Y. at \$1.00 per year.

MR. H. W. TONKINS, the breeder of Chester White hogs, of Fenton, Mo., writes: "I wish to say that I am well pleased with the good old RURAL WORLD as a medium to reach the farmers and the breeders of the Mississippi Valley, and also as to the great value of its general information. I do not know what I should do with my pigs but for my advertisement in your valuable paper. Please accept my thanks for the assistance your excellent paper has as an advertising medium, rendered me."

THOSE of our readers who are engaged in fruit culture should not forget that the meeting of the Mississippi Valley Horticultural Society takes place at Kansas City on January 22nd, and will continue the three following days. This will be a very interesting and profitable meeting to fruit growers generally, and those having the management of the meeting have made all necessary arrangements to receive and entertain visitors. It needs not that we urge all interested to make a point of being present and stay through the entire meeting.

COL. COLMAN: Enclosed find one dollar for the RURAL WORLD for 1884. I used to take it, but thought I would change to another paper for a year or so, but find I can't get along without the old reliable RURAL. No other agricultural paper suits me so well and you may count me a subscriber as long as I remain a farmer, for I believe the RURAL to be the farmer's best friend. Wishing you a happy New Year, I am
R. B. HAGEMAN.
Hammond, Ills.

A LECTURE course for farmers at the agricultural college, will be given from February 4 to 15, by the regular instructors in the college. One or more lectures will be given on the following topics: Breeds of cattle and swine; breeding, improving and care of stock; care of farm machinery; health on the farm; adulteration of food; economical farming; tame grasses; ensilage; what to feed; meteorology and plant growth; sorghum; growth and manufacture; horticulture; principles of pruning; the digestive organs of domestic animals; injurious insects. A number of leading farmers of the State have been invited to lecture upon their specialties. All the facilities of illustration and study owned by the college will be at the disposal of the students attending the course. These include several compound microscopes, a good agricultural library, meteorologi-

cal apparatus, six breeds of cattle and four of swine, orchard, nursery, arboretum, vineyard, etc., etc. A limited number will be boarded at the college farm for a price not to exceed three dollars per week. Persons attending will be aided in securing cheap board in the city. Persons expecting to attend or desiring further information should write to S. R. Thompson, Dean Agricultural College, Lincoln, Nebraska.

In 1884, more than in 1883, it will pay all to bear in mind that, no matter what amount of science or past experience we bring to our efforts, the weather may interfere with and spoil it all, or nearly so. An all corn crop, or an all wheat crop may be as easily destroyed as an all grass crop. Farmers need only the suggestion to look ahead and provide for contingencies.

WE are very much pleased to learn from the secretary of the Mississippi Valley Dairy and Creamery Association, that a large number of gentlemen, eminent in various departments of dairy and creamery enterprise have sent him word that they will be present and add what they can, both by word and deed, to the success of the enterprise; that many of the most experienced dairy and creamery men will be in attendance and that the convention gives promise of being a decided success.

A FRIEND of the RURAL at Mobile, Ala., informs us he has lost 100,000 fine cabbage plants, which, with the average weather, he would be shipping to northern markets five weeks hence. The damage inflicted on this industry around Mobile has been enormous. Most of the cultivators there are unable to replace a single plant—as the plants are not to be had anywhere. The damage to early crops of this character in the South is estimated at half a million dollars. The cold wave, it appears, swept over the entire South—proving a surprise of the most disastrous character.

OUR CATTLE FOR HONDURAS.

The communications now being published, from the pen of our correspondent "Agricola" on the subject of cattle in the republic of Honduras, are attracting considerable attention among our own cattle breeders, many of whom—particularly of the class not connected with the large companies, who are absorbing so much of the range—would gladly avail themselves of a location offering satisfactory inducements in the way of climate, pasture, safety, convenient and cheap accessibility to market, and an abundant supply of native stock upon which to build up improved herds.

All of these conditions are found in the republic of Honduras. Every variety of climate is found, from the tropical valleys to the plateaus or table lands, advancing step by step like terraces, to which they are sometimes compared, until the mountain tops are reached, eight and ten thousand feet above the sea.

An elevation varying from two to four thousand feet furnishes the best conditions for raising cattle. The plateaus are clothed with an abundant supply of nutritious grasses, while innumerable streams of pure and wholesome water are found in every locality. A stable government based upon a wisely devised constitution, and which is seeking to foster every legitimate industry, offers every inducement to the safe investment of capital. The grazing lands are not remote from the channels of communication leading to the sea ports, where facilities are always found for cheap transportation to the markets of Europe and America. The vast plains are stocked with a race of cattle superior to the native stock of Texas and our western territories, and the government encourages the introduction of improved breeds.

Arrangements are now being made in this city for the organization of a company, which will at once proceed to secure lands for ranches, and by the introduction of thoroughbred males, grade up the native stock. We commend the enterprise as possessing, in our judgment, great merit.

—How the world has progressed within a century! George Washington, the first president of the United States, never saw a steamboat. John Adams, the second president of the United States, never saw a railroad. Andrew Jackson, the seventh president, knew nothing about the telegraph. Abraham Lincoln, the sixteenth president, never dreamed of such a thing as a telephone.

—THE maddest intoxication in the world is the delirium of business. The opium ecstasy is nothing to it; the effects of wine are impotent compared to it; the mad strength of more powerful stimulants are neither as lasting or as inspiring as it. Let a man become enthralled in the maelstrom of business anxiety and all else is forgotten. Home, health, wife, children, enjoyment, self, God are all lost sight of in the mad excitement of business. It is a form of selfishness in which God is unknown; a race where there is no goal; it is an intoxication that knows no return to sobriety; it is a struggle where the adversary is unseen; it is a strife that knows no reward but itself—no end but the grave.

The Cattle Yard.

The Republic of Honduras as a Cattle Producing Country.

In order that the readers of these articles may be able to form an idea of the extent to which American capital is invested in Honduras, I will mention a few of the enterprises already inaugurated and in operation. The Potosi Mining Company, owned principally in Chicago and Bay City, Mich., is in active operation, and large amounts of valuable machinery and supplies have been shipped from the States. A company was organized in New York last summer, designated the "Central American Syndicate," to build railroads and develop mines.

Messrs. Schmidt & Ziegler, of New Orleans, are preparing to place a line of steamers to the ports of Honduras in addition to the two lines already in operation.

Col. Shears, before referred to, has the exclusive privilege of navigating the rivers Uru and Blanco for 15 years, and has already spent considerable sums of money in improving them. Another company has the exclusive right to the navigation of the river Chamblin for 15 years, with valuable mining and timber cutting privileges. Another, has the exclusive right of the navigation of the

Lake of Yojoa for 40 years, with other important privileges.

A franchise has been granted for the construction of a narrow gauge railroad from the Lake of Yojoa to the head of navigation on the Blanco river, a distance of about 12 miles. A grant to establish a cotton mill at San Pedro, with important land privileges; and for the erection of a sugar mill at San Pedro, with favorable land franchises. Space will not permit to go through the entire list, but enough has been presented, to show the interest we have in the prosperity of our neighboring republic. All of these enterprises involve the expenditure of large sums of money. There are doubtless a larger number of Americans now in Honduras than of any other nationality foreign to themselves. It seems strange that the cattle interest, which is absorbing so much money and territory elsewhere, should have been, as yet, so much overlooked in Honduras, where it constitutes the most obvious source of wealth. The comparatively open character of the interior country, and its vast savannas covered with natural and unfencing meadows, are eminently favorable for the increase of this kind of property to an indefinite extent. The native cattle usually grow above what is regarded as average size in this country, are of great beauty and strength of form, powerful neck, short head, and compact but relatively short limbs, showing unmistakably their descent from the blooded Spanish stock imported generations ago. Vast herds are raised in various districts of the State, and constitute a principal part of the property of the people. The unrivaled position of this beautiful republic, its vast resources, its climate adapted to every zone, furnish all the conditions favorable to nurturing and sustaining a large population, and point unerringly to the ultimate and powerful State. A traveler of much experience in this highly favored country, says that "the various pulmonary diseases that are at present making such ravages among the happy homes of our own country are totally unknown. The word consumption, is not found in its 'medica,' while bronchitis, diphtheria, and rheumatism, have never been heard of, by the healthy natives of Honduras."

Thos. Brooks, Esq., one of our subscribers, says that big law in cattle arises from injured teeth. He was for many years a butcher and has had excellent advantages for examining such cases. There was much more of this so-called disease thirty or forty years ago than now, because more cattle in proportion were fattened on corn than now. Most of the cattle butchered now are grass fattened. In chewing the ears of corn, cattle frequently injure their teeth, and their jaws, and pus forms enlarging the jaw. If it is not removed, the animal will die. It is a matter can discharge freely the animal will get well.

Corn and Cob Meal.

—The subject of grinding corn with the cobs has been discussed in the papers, yet at the risk of being thought tedious, I venture to give my views and experience on the subject. More than forty years ago my father was the only man in the vicinity who practiced grinding corn with the cobs. All corn fed to stock or animals of any kind, except swine, was mixed with other grain and ground without shelling. His reasons for this were, that corn was a very heavy and heating kind of feed, and was liable, if fed freely, to injure the animal; and that the cob was a correction and gave tone to the stomach. It made more bulk, besides containing more nutriment than could be offset by the additional cost of grinding. Many were the long arguments to which I have listened when a boy, between him and his neighbors, upon the subject, and many the urgent requests that they should try the experiment and save the time and labor of shelling, which was then done by hand on winter evenings, or by threshing with a flail upon the barn floor, there being no patent shellers. This was, perhaps, to them, the strongest argument used. Be that as it may, one after another adopted the practice and were well satisfied with the results.

When I began to do business for myself, I located in another part of the town, and not one of the inhabitants practiced it, and all were opposed to it, and, being determined to satisfy myself, I tried many experiments until I was perfectly convinced of the superiority of feed ground with the cobs, either alone or mixed with other grain, to that made from shelled corn. Meal made from southern or western corn is preferable to our northern corn, for it is not so heavy or so heating, and in all respects, when used alone, makes a better feed, but still I would rather it would be ground with the cob or mixed with lighter feed. I have fed to all kinds of animals in various ways, and for different purposes—to working oxen, to fattening cattle and cows for milk, and young cattle for growth, and in all cases have found the results the same, always in favor of the cob meal, except in the case of fattening hogs, which would, if fed lavishly, be apt to eat the finer parts and root the coarser (the ground cobs) out of the trough. It is surprising to see the revolution in public sentiment in the neighborhood. There is scarcely a farmer in the vicinity who shells five bushels of corn in a year, and many, not one. If they want some for family use they buy it.

I will give the results of some experiments with working oxen—drawing stone, building roads or in the woods—fed high, 12 quarts each per day, or sometimes more, each pair fed alike, that is, as many pounds of each feed. Those fed on clear meal held their own as to flesh, but sometimes lost a feed for the want of an appetite, needed constant care and watchfulness, occasionally phlegm or some kind of desling, and after a few months their hoofs grew hard and brittle and difficult to shoe. Those fed on cob meal seldom missed a feed, almost invariably had a good appetite, invariably in warm weather stood the test better, the hoofs were softer and tougher and held the shoe much longer, and in every instance the oxen gained in flesh. Milch cows fed on fine meal alone will gain milk for a time, but the result will be that the feed is too heavy, and after awhile goes to flesh and they will become dry, or nearly so, which would not happen if fed with meal ground with the cob. In fattening cattle the same objection exists—it is too heavy and too heating in its nature to produce the best results; 100 pounds of the meal ground with the cob are worth more fed to any animal, except hogs, than the same weight when ground and fed alone.—Country Gentleman.

Little Labor Growing Cattle.

In conversation with a prominent cattle grower, the Denver Journal of Commerce learned some valuable facts pertaining to cattle growing at the present time upon the great plains of Colorado, Wyoming, New Mexico and Arizona. Said the gentleman: "A man can control more capital with less labor in cattle growing than in any other business he may engage in. Here is a cou-

try from a thousand to fifteen hundred miles long by two hundred miles wide, extending along the base of the mountains, that is the best grazing country in the world—unless it be the Mussel Shell country in Montana. This country, in my opinion, is susceptible of holding ten millions of cattle for all time to come. It is possibly one-third occupied to day, but it is filling up very fast. While one hundred and fifty thousand head of beefs will go east from this pasture field the present fall and winter, probably the increase on the range from calves and from importations from abroad will be a million (and a half) in numbers. The bulk of these stock animals are bred in Texas, where the climate is warmer than here, but many of them come up from the western, or grain growing states of Iowa, Missouri and Minnesota. The railroads bring these last young, or stock and mals, and lay them down here at a fine profit to the shipper. A yearling that would cost fifteen or eighteen dollars in Iowa and Missouri, will bring twenty-five and thirty here.

Cattle Trade With Mexico.

Consul General Sutton, at Matamorras, has addressed to the State department a communication on the subject of beef cattle in Mexico and the United States, having reference especially to the question of how best to supply the demand for cattle for ranches for the western states. For the past two or three years, he says, cattlemen have begun to look beyond Texas and into Northern Mexico for his supply. The chief cattle range of Northern Mexico, he says, lies between a line drawn from Guaymas to Tampico, and includes Sonora, Chihuahua, Coahuila, Nuevo Leon and Tamaulipas, an area of 300,000 square miles, two-thirds of which are grazing lands. There may be in this country 6,500,000 animals, divided as follows: Goats, 2,500,000; neat cattle, 1,500,000; horses, 1,000,000; mules, 500,000. The imports of live cattle from Mexico have in the past paid an average value of 20 per cent, but under the recent treasury regulations, the scope of which has been established in a test case, animals for breeding purposes can be imported free of duty, the persons importing them being only obliged to satisfy the consul and collector that he imports them for such purposes. The decision in this last case is already known to the length and breadth of the frontier, and anticipates that stockmen in Texas, New Mexico, Arizona, Kansas, Colorado, etc., will take full advantage of it and go to Mexico for breeders, and that it will give great impulse to the cattle raising industry in Northern Mexico.—Arizona Live Stock Journal.

Death of William H. Sotham.

—The death of this gentleman, who was widely known among stockmen, occurred in Chicago last week. His preference for the Hereford made him some strong and even bitter antagonists, but viewing his career calmly we think all will admit that his championship of an improved breed has been no detriment, but a benefit to the country at large. The Hereford breeders owe to Mr. Sotham a debt of gratitude. He was a Hereford man when Hereford men were scarce. He was a Hereford man when it was fashionable to decry the Hereford, and he remained a Hereford man until he saw the merits of his favorites acknowledged privately and publicly. His death will be sincerely regretted by a large circle of friends and acquaintances.

Cattle Notes.

We have received No. 1, volume 1, of the Arizona Live Stock Journal, published at Tucson, by Messrs. Cameron Bros., at \$5.00 per annum. It is a bright and spicy little paper full of valuable information and cannot fail to be of value to the people of that good country. The editors evidently know what their readers want and are able to provide it for them.

—Dodge City, Kas., may be put down as the greatest shipping point for range cattle in the United States. During the shipping season of 1883, 73,283 head were shipped.

—George F. Morgan, of the Wyoming Hereford Breeder's Association, of Cheyenne, Wyoming, has gone to England to buy and import 200 head of yearling and two-year-old Hereford bulls.

—W. B. Grimes has disposed of his half interest in the Grimes & Thornton ranch, in Wyoming, consisting of about 13,000 cattle, mostly steers, for \$200,000. George and William Sheldy were the purchasers.

—In Philadelphia the old and broken down horses are purchased by those in charge of the Zoological Garden for food for their carnivorous animals. Broken down horses are purchased at from \$2 to \$5 each.

—On Ontario the Short-horns in 1883, numbered 15,385, while all the pure breeds added gave a total of 23,610. The Ayrshires, second in point of numbers, summed up 4,496. Devons 1,538, Galloways 1,189, Herefords 851 and the Aberdeen polls 270.

—Doc Day also contracted to deliver all his yearling steers on the Driskill ranch, south of Dodge, next spring. There will be about 2,500 head, and the price is said to be \$22. Albert Dean, of Arkansas City, Kan., who is holding cattle in the Cherokee Strip, is the purchaser.

—The total receipts of cattle at Chicago from Jan. 1st, to Dec. 1st, 1883, have been 1,712,507, against 1,456,685, for the corresponding time in 1882—an increase of 256,822; of hogs, 4,992,704, against 4,389,724—a decrease of 30,980; and of sheep, 670,935, against 575,527—an increase of 95,408.

—Last week Col. J. M. Day sold his half interest in the Day & Zimmerman ranch, formerly known as the Dawson ranch, about 60 miles south of Dodge City, Kan., to his partner, J. K. Zimmerman, for \$85,000. There are said to be 6,000 head, all shire cattle, from yearlings up, on the ranch, which makes the price about \$28 per head.

—An Illinois stock-raiser, who gives about one-third oil-cake and two-thirds corn, with rough feed sufficient, tells an exchange that with this ration his beef cattle fatten one-third faster than with corn alone. Another says his animals never took on flesh so rapidly as since he began the use of oil-cake.

—In the first ten months of 1883, England imported 415,648 cattle of all kinds, against 907,283 in the same part of 1882; 993,591 sheep against 14,405. The value of the beef cattle imported from the United States in the same part of 1883 was \$4,597,270, and in 1882 it has reached \$15,366,325.

—Leslie Combs, of Lexington, has sold his choice flock of imported Southdown sheep to George L. Danforth, Louisville. These sheep are superior individually, as well as in breeding. The proof of this is found in the results obtained by them at the fairs at which they have been shown in this country. Seven of these sheep are from the flock of the Prince of Wales and five of them are of Lord Walsingham's breeding. The ram is an animal of the highest merit.

—John T. Ewing & Son, of Kentucky, had a public sale of unregistered Jersey cattle in Topeka Tuesday. Mr. S. A. Sawyer, who attended this sale, gives us the following report: Twenty-three cows averaged \$88.99; 5 heifer calves averaged \$30.00; a lot of high grade Short-horn heifers, a year old past, averaged \$32.00; a fine lot of grade Short-horns, coming three years old, sold from \$50 to \$100 each.

—The prospects for the annual meeting of the Kansas Short-horn Breeders' Association are very flattering. It occurs in Topeka, Tuesday, February 12th. Governor Glick will deliver an address; ex-Lieut. Gov. John Scott, of Iowa, will make an address on the "American and his cow," and it is expected that among others present will be Mr. Wm. Warfield, of Kentucky. E. M. Shelton, of Manhattan, is secretary.

—W. B. Kidd left yesterday for Wichita, Kansas, with the 1,100 bull calves recently purchased by Col. R. E. Edmondson in Clark and the adjoining counties for the Franklin Cattle Company. The calves will be fed in Kansas until the first of April when they will be shipped to the ranch in the Pan Handle Texas. They will be attended to by W. S. and Theodore Eaton, W. H. Nelson, of Clark, and a Mr. Clark, of Lexington. Mrs. Kidd will also accompany her husband and spend the winter in Kansas.

—In his report to the secretary of the Interior, Governor Crosby makes the following estimate of the number and value of cattle and sheep in Montana, in October 1883: Number of cattle, 475,000; valued at \$30 per head, \$14,250,000. Number of sheep, 700,000; valued at \$20 per head, \$14,000,000. Number of horses, 90,000; at \$75 per head; value, \$6,750,000. Twenty-five thousand head of improved breeds of cattle have been brought into the Territory; also some of the finest racing and trotting stock.

—The Franklin Company, of Texas, has a wise thing in the way of fire guards for the protection of the range in its pasture. After plowing a guard around the whole at the line of fencing, they have laid the pasture off into sections—or townships—of six miles square by good and ample guards. The company has made 500 miles of guards on its domains in this way. That is a great deal of work, but in the preservation of a stock range there is a great deal at stake. Fire is just as likely to start inside a pasture or range as outside, and it is good to know it cannot all burn—especially of late years, when there is no place to welcome a man who arrives with several thousand voracious cattle in the middle of a hard winter.

—We have received a report of the year's work of the Franklin Land and Cattle company, under the skillful and successful control of B. B. Groom & Son, managers. This firm branded 16,000 calves and marketed 8,000 beef steers and 1,000 fat cows. This stock, it will be remembered by our readers, was sold by the Messrs. Harrolds & Ikards, last spring, to the present company, 54,000 head counted out, and \$30,000 range delivery. Estimating the beef at 26 cents and the calves at \$130.00, one can readily see how cattle raising, when well managed, will pay. B. B. Groom & Son are in charge, and all who know the former will easily account for the success. Sound judgment and untiring energy, applied as Mr. Ben is doing, will win large returns.—Texas Live Stock Journal.

—An interesting letter appeared in Monday's *Courier-Journal* from Lexington, concerning the history of Woodburn, the fine stock farm belonging to A. J. Alexander, consisting of 3,000 acres, and located in Woodford county. The letter states that these lands were granted to Hugh Mercer, of Revolutionary fame shortly after the war of 1812. The farm is located 15 miles from Lexington on the main road to Frankfort, and was purchased by Robert Alexander, a great uncle of the present owner, near the close of the last century. The Alexanders were the founders of pure-blooded stock, being the first Kentuckians who ever imported stock directly from England. They were the owners of old Lexington, of world-wide fame, and the sire of more successful racers than any other horse the world has ever produced.

—T. C. Anderson, Slide View, Ky., states that "the demand for Short-horn bulls throughout his State has been unprecedented during the year 1883, and at much better prices than at any time since 1878. I doubt whether three car-loads of thoroughbred, eighteen-months' Short-horn bulls could be bought from their breeders in any three of the heaviest Short-horn counties in Kentucky. The grand average for 1883, at public sales of Short-horns in all the States and Canada of \$205.00 per head must be very gratifying to the breeders of this matchless race of cattle throughout America, when it is considered how few of the best bred representatives of the leading families have ever been offered at public sales, and that from the auction block almost 3,300 head have found new homes. The increase in average price per head has been steady since 1878, year by year, and from a general average of \$115 per head, on 2,885 animals in 1879, prices have advanced to \$205.50 per head on a grand total sale of 3,394 Short-horns during 1883, and that, too, with this number including an amazingly small per cent. of those most highly appreciated by the great majority of breeders."

—The Spirit of the Times has not inserted the stallion Durango in the 2-30 list, because it says the National Trotting Association has received no official notice that he has trotted in that time, and also because it thinks it questionable whether he has made such a record. Mr. Studer, you will have to look into this matter! It is claimed this stallion trotted in Chicago last fall in 2:23 1/4.

The old man who has charge of Goldsmith Maid was asked about her as he was standing in her stall. He said, patting the old mare affectionately as he spoke, "I've had the care of her right on to five years. She has been home six years and has had three colts. The two living are a two-year-old bay filly, by Gen. Washington, called Rosebud, the very picture of her, and a three-year-old horse colt, also by Washington. This colt is a brown, with white spots on his back near his coupling the same as came on the mare five years ago, but the only sign of age is the sprinkling of grey hair about her head and shoulders. You can't find a blemish on her, and see how full her tail is yet. She would drive prompt and free as ever, but she hasn't had a harness on her since 1877. You ought to have seen her in the ring last night, prancing around like a colt, and lunging out with her heels at a dog. We turn her and Lucy out every day; they run together, and are groomed twice a day. Lucy got in last spring, but slipped her colt the latter part of September.

There are many advocates of the Clay family of horses. They are generally of good size, heavy bone, and quite tractable and valuable on the farm as well as for road purposes. At a meeting of farmers at Richmond, N. Y., a Mr. Andrews said he had been forty years driving in and out of Rochester, his farm being only five miles distant. For thirty-five years he had been a breeder of horses, trying them all in turn, and thought his experience might be worth consideration by the younger men. Combined with his experience was observation of other men's experiments. He had crossed with the thor-

Notes—Correspondence.

Coming Meetings.

Mississippi Valley Horticultural Society at Kansas City, Jan. 22d, 23d, 24th and 25th, 1884.
January 29th, Indiana Jersey Cattle Breeders, Indianapolis.
January 30th, Indiana Swine Breeders, Indianapolis.
January 31st, Indiana Wool Growers, Indianapolis.
Mississippi Valley Dairy and Creamery Association, St. Louis, Mo., Jan. 30th and 31st, 1884.
February 6th and 7th, New York Cane Growers' Association, Geneva, N. Y.
February 13, Kansas State Cane Growers' Association, Topeka.

—Readers are requested to see the advertisement of a farm for sale at Altus, Franklin Co. Ark., in this issue. From the description given, and from what the advertiser writes us, we are disposed to think it a very desirable property for any one wishing to go South.

EDITOR RURAL WORLD:—The course of the dried fruit market of late puzzles and disappoints me. I have been holding back a quantity of dried peaches for a better market which was almost certain would follow the extraordinary cold weather of the past week. It is, I suppose, conceded that the peach prospects for 1884 have been swept off

clean in the Southwest, and I therefore naturally expected the usual advance in such cases. I am wholly unable to account for the sluggishness of the market. If you can throw any light on the subject you will oblige a subscriber.—L. H. Alto Pass, Ills. Jan. 13.
.....REPLY: It is true an advance in prices should follow the late cold spell. The prospects for peaches the coming season are exceedingly poor throughout the West and South. The prominent dried fruit dealers in form as that the great abundance of prunes in the leading markets, and at prices almost unprecedented, demoralized the demand for dried peaches. The prune, whether on the table of the hotel or private family, is considered far preferable as a dish to sun-dried peaches, and when the price is about the same the latter becomes neglected. Turkey has had an enormous prune crop the past season and is now flooding the markets of the world with them. Several thousand casks are now about due in New York, to be added to the liberal supplies already in the hands of dealers. They can be laid down in St. Louis at 5 1/2 cents per pound and are coming here freely.

A Successful Road Maker.

It would seem from reports from all over the country east and west that a successful and economical machine has appeared for building and repairing roads. The county commissioners courts of Cole, Audrian, Callaway, Newton and other counties of Missouri have taken advantage of the liberal "trial offer" of S. Pennock & Sons Co., of Fort Wayne, Ind., and in every case these machines have been pronounced a grand success. As good roads are essential to an enlightened and progressing community any new tool promising so well should have a fair trial.

Making a Pasture.

EDITOR RURAL WORLD: I finished a few weeks ago clearing thirty acres timber (contracted to be done by Sept. 1st). My object is grass. Will you or some of the many readers of your valuable paper please tell me through its columns the surest and best way to secure a good stand. I prefer red clover or blue grass.

The growth was mostly black walnut, elm, oak, hickory and mulberry, and is good ridge land. Left say three or four select trees here and there per acre. Four years ago was culled closer and has been pastured since and many of the stumps are rotted and gone. Some have advised to plant in corn for two or three years, then put in grass, but I want to hear from the RURAL WORLD. How about mixing seed and sowing several kinds at the same time? Don't believe I have seen anything in your columns concerning this. Please be explicit as to season for sowing, etc., as you might say I am no farmer. Also when is the right time to cut common willows (swamp) so they will take root and grow if planted out in low wet soil. Hoping to hear from you soon, am yours, etc.—W. C. Hyatt, Johnson Co., Mo.

Remarks: We hope some of our readers will answer your enquiries. We have had some experience in putting similar land in pasture. If you will sow grass seed about the first of March and harrow it in the best you can with any harrow that can best get between the stumps and you have a fairly favorable season as to moisture, you can get a good stand of grass the first season. We should sow orchard grass, blue grass and red top about equal parts, or about half a bushel of each to the acre, and then add to that mixture one-half gallon of clover seed to the acre and you will get a pasture in a year or two that will make stock happy and fat. Sow as early in March as possible so as to have the seed germinate before dry weather sets in; keep stock off until September if possible, and if kept off for a year all the better. Grass is the most important crop on the farm and once established is permanent. A variety of grasses is important, as each has its special season of greatest vigor. The orchard grass and clover will resist the drought best. Orchard grass is usually one of our most valuable grasses for pasturage.

Cut the willows at any time this winter and bury the cuttings 8 or 10 inches deep. In the spring stick them in the land where you want them to grow, and they will probably do well.

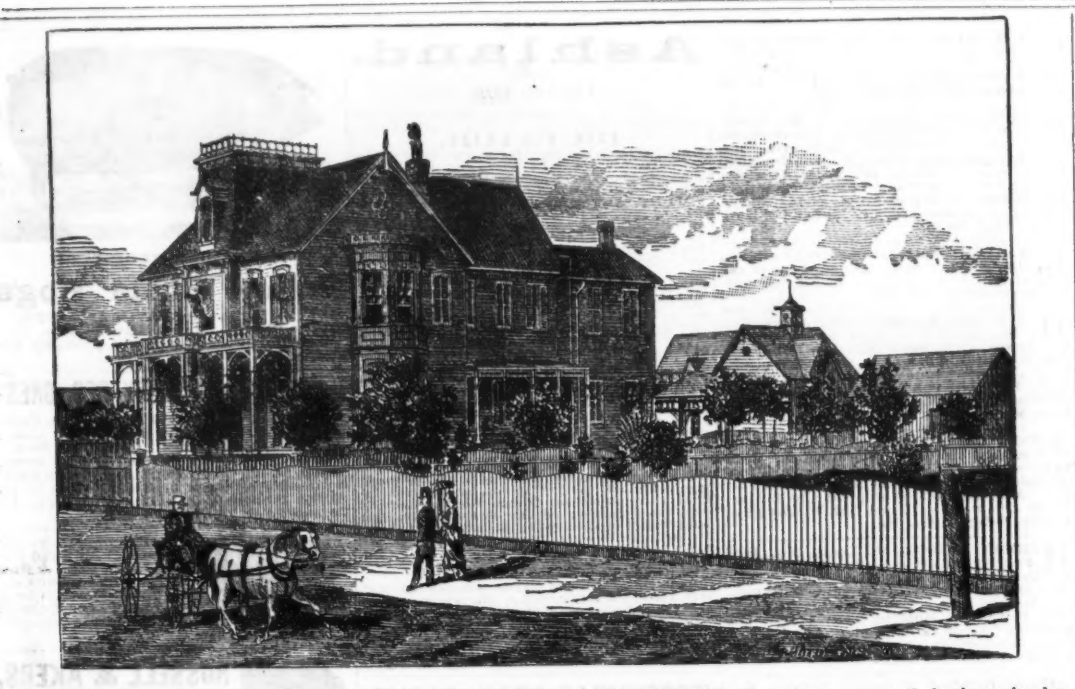
The Horseman.

Horse Notes.

C. B. Allaire, of Peoria, Ills., has purchased the stallion Voltaire that trotted in Springfield, Mass., in 1881 in 2:20 1/4. Voltaire was foaled in 1868. His sire was Tattler, son of Pilot Jr. His dam was Portia by Mambrino Chief. He is well bred, and ought to get trotters. He will be kept for breeding purposes.

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We present above a cut of the residence of Joseph H. Brown, Esq., of Fort Worth, whose mammoth business is elsewhere described. Mr. Brown has succeeded admirably in his enterprise in Texas, but he fully deserves it all, as a more genial, whole-souled, gentlemanly and public-spirited man is not found in all the Southwest.

TARRANT COUNTY, TEXAS.

One of the Famous Cereal, Cotton, Fruit and Stock Counties of the Lone Star State.

Mer Resources, Attractions, and Many Advantages, which now invite the Attention of Agriculturists and Stock Men.

FT. WORTH, THE MAGIC CITY OF NORTH-TARRANT COUNTY, TEXAS. HER GROWTH AND UNPARALLELED PROGRESS.

Commercial, Manufacturing, Railway, Social and Educational Advantages.

INTRODUCTORY.
The reader will please bear in mind the fact that the compilers of this descriptive review of Tarrant County, write from actual observation and after several years' residence in Texas. The figures and statistics are official, and may be relied upon. Exaggeration and word painting have been carefully eschewed and only a plain, every-day description has been given, in order that all may fully comprehend its full significance. The JOURNAL aims to furnish just the information wanted by men wherever the English language is spoken, who desire to better their condition in life by emigrating to a more inviting field. It will furnish reliable information to all classes, agriculturists, stock raisers, capitalists, manufacturers, mechanics and laborer, and will place the intending emigrant or capitalist in direct correspondence with reliable men in every part of the Great Southwest.

■ Texas is to-day the most prosperous as well as the most progressive of our Western States. Her capabilities and resources are just being discovered. Capital and immigration are pouring in at such a rate that in less than ten years she will have a population of 5,000,000 souls. And there is room for them all, as well as a hearty welcome extended.

lies in north latitude 32 deg., 40 min., and west longitude 97 deg., 15 min.; is 345 miles northwest of the port of Galveston, by the Gulf, Colorado and Santa Fe Railway, and embraces an area of 900 square miles. To give the reader an idea of the wonderful growth of this magnificent county in population and increase of wealth, the following official statistics are given.

Population in 1870	5,738
" " 1880 (8 per cent colored)	24,671
" " 1883 (estimated)	30,000
Assessed value of taxable property in 1870	\$1,392,877
Assessed value of taxable property in 1881	5,909,687
Assessed value of taxable property in 1882	7,300,686
Assessed value of live stock in 1881	\$68,235
" " 1882	673,340

The present assessed valuation of taxable property exceeds \$10,000,000.

The county levies a tax of 50 cents on the one hundred dollars for all purposes, and has only a small floating debt, while the population is characterized by intelligence, public spirit and obedience to law.

varies in different portions, that of the uplands being a light, sandy and frequently black wax, underlain with a strata of limestone, rendering it eminently suitable for the successful cultivation of wheat, which is now one of the staple crops. The soil is fertile when properly cultivated yields as high as 25 and even 30 bushels to the acre. The land lying along the streams is alluvial, admirably adapted to cotton, corn, cereals, as well as root crops and vegetables. Peaches, apples, plums, pears and other varieties of fruits also do remarkably well, and yield heavily when they receive proper culture. Not more than one-fifth of the area of the county is inferior land.

As the mean annual rainfall is 36 inches, usually so distributed that the growing crops receive its full benefit; protracted droughts are of very rare occurrence.

The west fork of the Trinity River enters the county at its northwestern corner, and flows southward to the center, and flows out near the middle of the eastern line. Near the center of the county, the Trinity River flows in from the southwest, besides which there are the Fossil, Big and Little Bear, Seymour, Village, Henrietta, Mustang, Silver, Ash, Walnut, and other streams, which with their branches afford abundant water and excellent drainage to its every portion. There are also several springs, and well-water is obtained at a depth of from 15 to 40 feet. Artesian wells have also been sunk and water obtained from 300 to 350 feet, and the flow of some of them is as much as 100 barrels per hour. The water of many of these latter wells is known to possess valuable medicinal properties.

TIMBER.
Running nearly north and south through the eastern edge of the county is a belt of woodland from ten to twelve miles wide, known as the Lower Cross Timbers, and consisting principally of the low, heavy topped post oak, with black jack and Hickory interspersed. Besides the Cross Timbers, all the streams above mentioned are fringed on either side with a heavy growth of the different oaks, ash, pecan, elm, hackberry, chinquapin and cottonwood. Perhaps two-fifths of the entire county is timbered, so distributed as to afford abundance of fuel and fencing in all localities.

Bois d'arc hedges are grown to some extent and have proven successful. Fences constructed of posts ten feet apart, two wires and a plank cost about \$25 per mile. The lumber is worth from \$16 to \$20 per 1000 feet.

GRASSES.
Some writers of a botanical turn of mind have computed that not less than 150 varieties of native grasses are found in Tarrant County. These form an inexhaustible source of revenue, which costs nothing to produce, while the climate is such that they are cured upon the ground, thus affording abundant nutritious food for stock of every description. Considerable hay is also made for export, and by the more provident class of farmers who find that it pays to feed stock during the winter months, even in Texas.

Domestic grasses also grow luxuriantly wherever attempted and are found to be a profitable crop.

LIVE STOCK.
The rapid settling up of Tarrant County by an excellent class of agriculturists, has naturally very materially decreased the area of grazing lands, and stock raising, as a distinct pursuit on a large scale, is rapidly giving way to farming, although the stock

ing way to farming, although the stock interests of the county are as yet of great importance. While the large herds have been driven westward, much attention is being paid to improved breeds, and the aggregate price of stock has been but little diminished. According to the assessment rolls of 1882, there are in the county the following number of live stock:

Horses and Mules	9,817 head.
Cattle	35,885 "
Sheep	8,567 "
Swine	12,341 "

Work animals and all kinds of domestic food supplies can be brought at reasonable prices. Domestic fowls are also raised in large numbers.

As regards game, there are a few deer; small game is plentiful and the ordinary varieties of fresh water fish are fairly abundant in all the larger streams.

The climate is all that can reasonably be desired. The high, rolling prairies, pure water and absence of pools of stagnant water, together with a constantly blowing, gentle breeze, all combine to render it peculiarly healthy and comfortable the year round. The extreme heat of summer is 90 to 95 degrees, rarely rising to 100 degrees. In the winter the mercury rarely falls more than three or four degrees below the freezing point.

Sometimes a light snow fall of from one to four inches occurs, but seldom remains over four or five days. The ground is always "northern" usually last about three days, and their severity is very much exaggerated by contemporaneous writers on Texas.

Unimproved land suitable for farming is now held at from \$10 to \$20 per acre and improved land at from \$20 to \$30 per acre. In many instances a higher price is demanded and received. These figures are very low indeed when it is borne in mind that the same class of land in Illinois or Ohio would be considered cheap at from \$75 to \$200 per acre.

Titles are perfect in almost every instance, this being out of the range of the old Spanish grants and the title comes direct from the State of Texas and the Texas Pacific Railway Company has a few thousand acres of land yet for sale in Tarrant County, at low figures and on easy terms.

The Land Commissioner of that company, Col. W. H. Abrams, should be addressed on this subject, at Dallas, Texas.

EDUCATIONAL.
The scholastic population of the county outside of Fort Worth, the county seat, exceeds \$3,750, for which ample educational facilities are provided. Every neighborhood has its school house and efficient teacher. Church facilities may also be enjoyed in all localities. These things go far to prove that the right class of people reside there and that no one need be afraid of being deprived of educational, religious or social advantages when settling in Tarrant County.

POLITICAL.
A thoroughly cosmopolitan population, drawn from all parts of the Union and Europe, generally of a superior class, and remarkably free from sectional, national, political or religious prejudices, will convince all thinking men that the future of this county is bright. No matter what the new comers' political faith may be, he will be made equally welcome whether he hails from Iowa or Mississippi; in fact the northern term is preferred, so long as he comes for the purpose of becoming a citizen and identifying himself with the county.

RAILWAY FACILITIES.
Four great railway lines cross Tarrant County to all points of the compass at present, these are the Texas & Pacific Railway, the Missouri Pacific Railway, the Gulf, Colorado & Santa Fe Railway and the Fort Worth & Denver City Railway. These lines afford the most rapid and easy access of market and shipping facilities.

Other lines of railway, some chartered and some projected, will shortly be built, among which may be mentioned the Texas & St. Louis Railway (narrow gauge), the Fort Worth & St. Louis Railway, and also a line from Fort Worth to New Orleans, which is now strongly talked of and rapidly assuming form. The Gulf, Colorado & Santa Fe Railway, of the northern terminus at Fort Worth, will also be extended northward from that point in the near future, to connect with the St. Paul & Northern Pacific, and also be built from Fort Worth in a north-westerly direction to tap the coal fields of Wisconsin and other counties. It will thus be seen that the county will be supplied with railways.

THE ABOVE.
is a truthful description of Tarrant county, one of the finest areas of agricultural land in the Southwest. To the emigrating world the assurance is given that the best places for a new and prosperous home. This is also the proper time at which to secure vacant lands, as by the law of increasing real-estate values, they will in the course of a year or two have doubled or even trebled in value.

With a country of such unlimited resources and advantages—it will some day possess a population of over one hundred and fifty thousand, which number it could easily sustain, and a tributary country of boundless wealth, resources and capabilities, it is no wonder that a city like Fort Worth should have come into existence and grown up as it has within the past decade. In 1870, when the Texas & Pacific Railway, the first road that reached the city, was completed to it, its population was scarcely 1,500 and its taxable value about \$300,000. In 1882 a census was taken by order of the city authorities, when it was found to have a population of over 25,000 and a taxable valuation according to the assessment rolls, of \$3,214,624. The population at present is fully believed to be at least 35,000, and the taxable value not less than \$5,000,000.

But few cities can show so remarkable a growth as this, and it is only fair to state that its growth is the natural result of the pluck, enterprise, public spirit and progressiveness ever evinced by its wide-awake citizens who have ever welcomed every enterprising settler, and who have not hesitated to calculate to benefit their city. The natural result is that the leading railway systems of the state converge and diverge lines, which are the great highways of commerce between the Atlantic and Pacific oceans, the great commercial centers of the north and east and the principal ports upon the Gulf of Mexico, Galveston and New Orleans, as well as Old Mexico.

The railways, entering there at present, are

as above stated, the T. & P. Ry., the Mo. Pac. Ry., the Ft. Worth & St. Louis Ry., the Gulf, Colorado & Santa Fe Ry. The map accompanying shows these various lines and the city's relations with the great cities and ports of the United States. That the G. & S. F. Ry. will be extended north from this point is now an assured fact, and this will form an important factor in the future progress of the city, inasmuch as it will give an additional and competing line to St. Louis and Kansas City, connecting at those points with the vast net work of railway systems concentrated there. The direct line to New Orleans, via Palestine, may be looked upon as certain to be built at an early day, as is also a line from Fort Worth to Brownwood in South Central Texas, and another to San Antonio, and the fine railway system centering there, and open up a new and fruitful field to the enterprise of her merchants.

Fort Worth has a fine system of waterworks, and more than sixty artesian wells, affording abundance of pure water, ample protection against fire and consumable material. There are also gas works, and electric lights will soon be introduced. A street car line and trolley lines are being constructed, and there are also a local telephone line as well as others connecting with surrounding cities.

Among the many enterprises calculated to add to the importance of the city, may be mentioned the Texas Continental Hotel Co., which is erecting slaughter houses there and will at present invest about \$100,000. Fresh meats will be shipped in refrigerated cars from there to all the principal meat markets in the United States, and will give employment to over one hundred men. There are also a large cotton compress, three ice factories, two iron foundries, two flouring mills, and four banking houses.

Many of the merchants do an exclusive business in all the various lines of merchandise, and it is plain that Fort Worth is destined to become a great supply depot for all northwestern Texas, her rail facilities and enterprising merchants plainly indicating this fact.

There is in operation a system of public free schools, under the control of the city authorities and supported by a pro-rata of the tax, and a special school fund, supplemented by a fund derived from a special school tax. The scholastic term is ten months and the number of pupils enrolled is over 1,100. Public free school buildings, large, comfortable and elegant, are now being erected in every ward of the city. When their completion it may be said that Fort Worth has the best school system of any city in the Southwest.

There are twelve church buildings of different denominations, grace every quarter of the city, showing that religion is not forgotten here, and the principal streets are macadamized and improvements upon all the other thoroughfares are constantly going on.

The city is also ornamented by an elegant stone court-house, and a jail, and an opera house that cost over \$40,000, and is also an efficient fire department, fully able to cope with the few fires that occur from time to time.

The city is beautifully and advantageously situated upon high ground, one portion overlooking the Trinity River, which makes a sweeping curve around the northern and southern parts. It is an extremely healthy location, and every neighborhood is favorably situated with any city in the state. Since the advent of the first railway up to the present day, there has been no cessation in the wonderful growth and prosperity of this city. This is in a great measure accounted for by the fact that it is the center of the great manufacturing and commercial hub of the Southwest, and the credit for having the most favorable real estate, mercantile pursuits or manufacturing opportunities in either, will do well to inquire further into the matter.

For the benefit of the laboring and artisan classes, the following table of wages paid in Fort Worth and Tarrant county is submitted:

Carpenters	.....	Per day \$2.00 to \$2.50
Brick layers	.....	" " 3.50 " 5.00
Stone masons	.....	" " 3.00 " 3.25
Plasterers	.....	" " 2.00 " 2.50
House painters	.....	" " 2.00 " 3.00
Blacksmiths	.....	" " 2.00 " 3.50
Wagon makers	.....	" " 2.00 " 3.50
Harness makers	.....	" " 1.75 " 2.50
Tailors	.....	" " 2.00 " 2.50
Printers, 45c per 1000 ems	.....	" " 2.50 " 3.00
Laborers in the city	.....	" " 1.00 " 1.50
Farm laborers, per month, with board	.....	15.00 " 20.00
Clerk's, per month	.....	40.00 " 75.00

The press is represented by the leading journals of Texas; the Live Stock Journal, weekly devoted to the live stock interests of the state; The Fort Worth Press, weekly devoted to the live stock interests of the city; and the Tarrant County News, published by the Loving Publishing Company. There are besides several weekly and monthly publications.

HOW TO REACH FORT WORTH.
Coming from the east, it is always best to take the N. Y. C. & H. R. Ry., concerning which route, C. B. Meeker, Esq., of New York City, will always be pleased to furnish information. This line connects at Buffalo, N. Y., with the famous M. C. E. R., of which first-class and direct line, O. W. Ruggles, Esq., is G. P. A., with headquarters at Chicago, Ill. By this line Toledo and Chicago are reached from either of which points the Washburn, St. Louis & Pacific is taken for St. Louis, where the Iron Mountain and Texas & Pacific route or the Missouri Pacific is taken for Fort Worth.

H. C. Townsend, Esq., is G. P. A. of this vast consolidated system, and he should be addressed by all desiring further information. His address is St. Louis, Mo.

SUNDRIES.

"The first woman didn't wear ear-rings," remarked Brother Talmage, in his sermon on Monday. "No," remarked a quiet little man in the corner, "nor anything else."

Health is Wealth.—It is worth more than riches, for without it riches can not be enjoyed. How many people are without health who might regain it by using Kidney-Wort. It acts upon the Liver, Bowels and Kidneys, cleansing and stimulating them to healthy action. It cures all disorders of these important organs, purifies the blood and promotes the general health. Sold by all druggists. See advt.

A: "Is the Baron at home?" B: "No, he sends word to you that he has just gone out." A: "Good! Give him my compliments and say I didn't call."

The music master says very affably: "Now, you see, children, to a march we have four beats to a measure, to accommodate our step; for I don't know anything that has three feet, except perhaps a milking stool." "Or a yard stick!" added a bright little girl in the back row.

—Impaired Digestion.—The majority of people suffer to a greater or lesser degree from this sad affliction many unthinkingly cultivate it by insufficiently masticating their food; others whose occupation is of a sedentary character have it forced upon them, the excessive use of tobacco, &c., all tend to develop it. The symptoms vary, one suffering severely after meals, another slightly, constipation or diarrhoea, flatulence, variable appetite, &c., are only a few of its unpleasant consequences. Now what is required, is attention to diet, assisted by a remedy which aids the natural secretions in the alimentary canal, and produces again a normal solvency of food. Such a valuable remedy is the celebrated Home Stomach Bitters.

"Aw, can you tell me, Miss Fair," queried George Washington La Duda, after a brief period of intense study, "why the—aw—Ponto's caudal extremity is like a coming event?" "No, Mr. La Duda." "We I, aw, it is something to a cur, don't you know—ha! ha!" "Very good, Mr. La Duda—very good. But can you tell me why your hat is like a bad habit?" "Why, er-r, aw; well, no—why is it?" "Because it is something to a void." "Aw! weally now, Miss Fair, you are just too bad for anything, don't you know?"—The Judge.

ROYAL BAKING POWDER
Absolutely Pure.

KIDNEY WORT
DOES WONDERFUL CURES OF KIDNEY DISEASES AND LIVER COMPLAINTS.
Because it acts on the LIVER, BOWELS and KIDNEYS at the same time.

KIDNEY WORT
Why? Because it cleanses the system of the poisonous humors that develop in Kidney and Urinary Diseases, Biliousness, Jaundice, Constipation, Piles, and Rheumatism, Neuralgia, Nervous Disorders and all Female Complaints.

KIDNEY WORT
FOR THE CURE OF ALL DISEASES OF HORSES, CATTLE, SHEEP, DOGS, HOGS, AND PULTRY.

HUMPHREY'S HOMEOPATHIC VETERINARY SPECIFICS
FOR TWENTY YEARS Humphrey's Homeopathic Veterinary Specifics have been used by Farmers, Stock Breeders, Livery Stable and Carriage Men, Horse Trainers, Manufacturers, Coal Mine Companies, Travellers, Hippodrome and Menageries, and others handling stock with perfect success.

HUMPHREY'S HOMEOPATHIC MED. CO.
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